

Manufacturers Record

Industry Construction



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Baltimore, Md.
MAY 22, 1930

A Public Bond Is a Public Trust

Government bonds, or the bonds of well-managed municipalities represent the acme of safety in the minds of investors the world over. In our economic system, they offer the highest guarantee that finance has devised to assure payment with interest of money borrowed by municipalities or other governmental divisions, and by corporations. As defined by the New Standard Dictionary, a bond is "an obligation in writing under seal, the simple form being that in which a person or corporation binds himself or itself to pay to another a certain sum of money at a specified time—an interest-bearing debt certificate issued usually by a corporation, municipality or government."

A public bond is a public trust, a sacred obligation. To default in payments of bond interest or principal is to commit credit suicide. No greater economic calamity can befall a community than to default on its legally issued bonds. For the sake of their honor and their future credit, the citizens of a community, under whatever adverse natural conditions or political mismanagement—since they are responsible for the administration in power—should never allow such a situation to develop. In thus condoning what amounts to the breaking of a sacred obligation, they are placing a stigma on themselves and their community which time has proved can never be erased, and a heavy penalty later must be paid in higher interest rates on future loans they may be able to negotiate.

No matter what the causes that brought about such a condition, except where a major catastrophe wipes out every dollar of wealth and the possibility of future accumulation of wealth, people who bind themselves through their elected representatives to pay for borrowed money should exhaust every means before they submit to a procedure that must inevitably condemn their community in the eyes of the investing public.

For a community to default on its public bonded indebtedness has been a comparatively rare occurrence, but there have been instances of this gross breach of trust. Business conditions in some parts of the country have made it extremely difficult for certain communities to meet the obligations which they assumed under prosperity and under expectations prevailing at the time the bonds were issued, but nevertheless a public bond is a public trust, a sacred obligation to be met at whatever cost.

FACTS

About Joints

Specifications have been set up by the American Association of State Highway officials and generally adopted by state, county and municipal administrators which requires tests for expansion joint. These tests and the reasons for them, are briefly:

- (A)—To control the oozing tendency by specifying the quality of asphalt as to penetration, etc.
- (B)—To provide material that will not blow up under traffic and scatter or wash out of the joint.
- (C)—When it comes to premoulded joint filler, the specifications provide for certain asphalt content of a defined quality and a certain fiber content.

Premoulded expansion joints of fibrated asphalt meet all the tests, but if a poured joint could be bodily removed from the expansion space and submitted to the tests required for the premoulded joint, it would not pass one of the ten required of the latter.

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Left
Is
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Reinforced
Expansion
Joint

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At the
Right
Is
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Expansion
Joint

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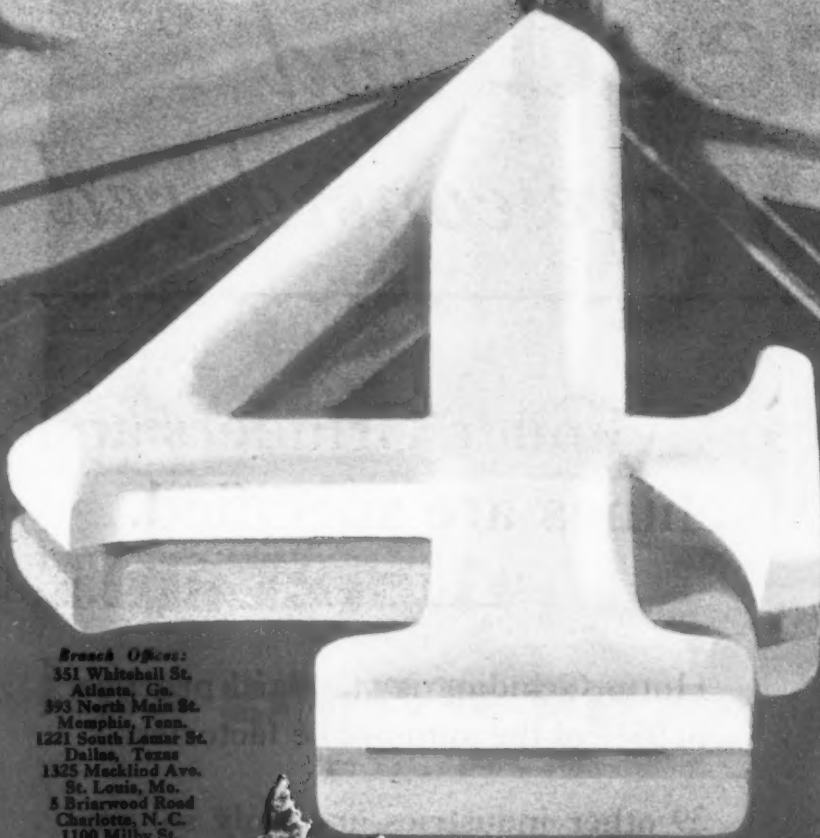
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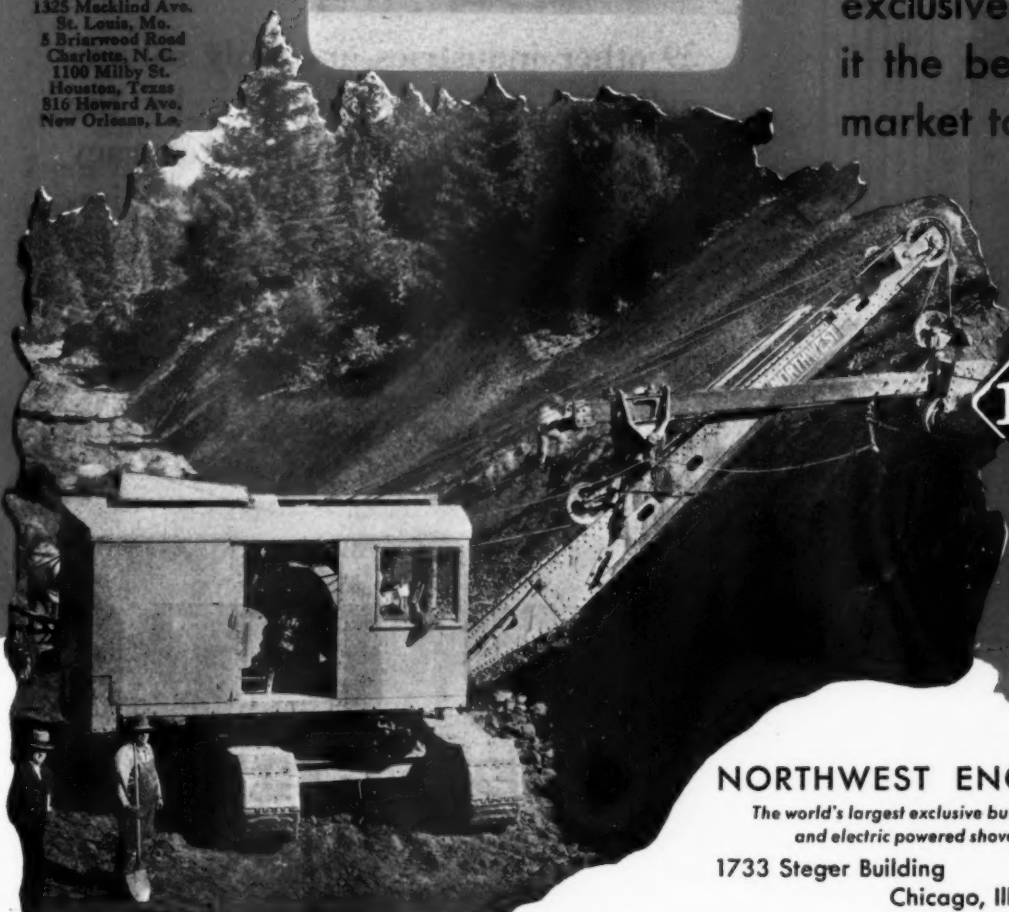
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Cylinders from $\frac{3}{4}$ to 60 in diameter and of practically any length can be Hutto Ground.



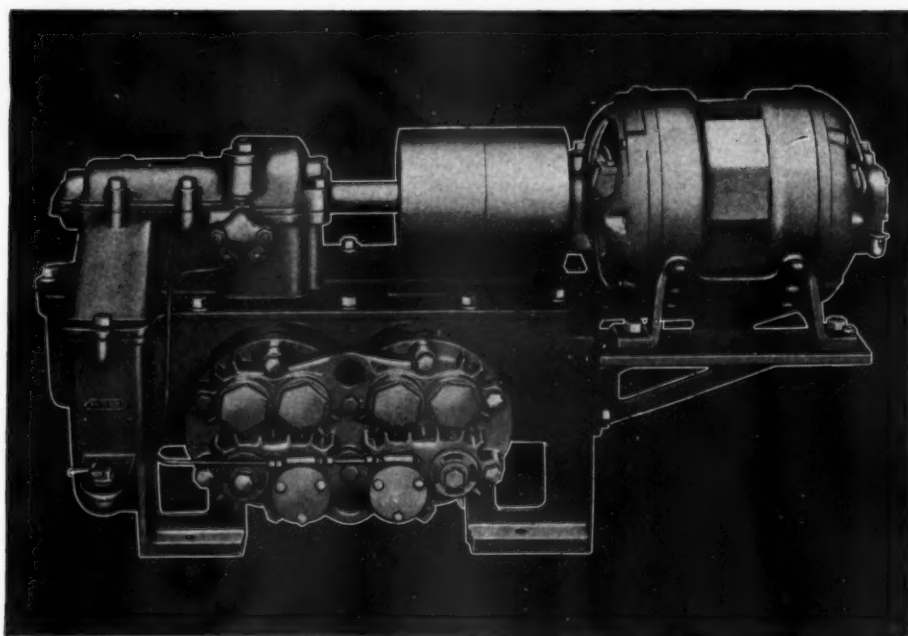
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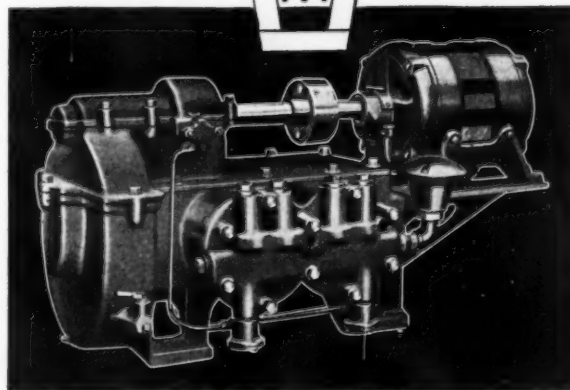
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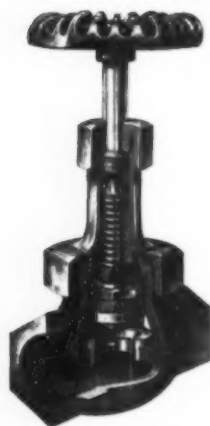
One of the ways is to solve the valve problem. You can't tighten up on operating expenses with valves that leak, need constant repairing and frequent renewals. Tear them out and install valves that have firmly established a reputation for efficiency, durability and economic maintenance.

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102H-57-62



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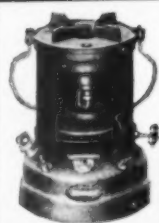
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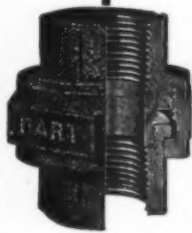


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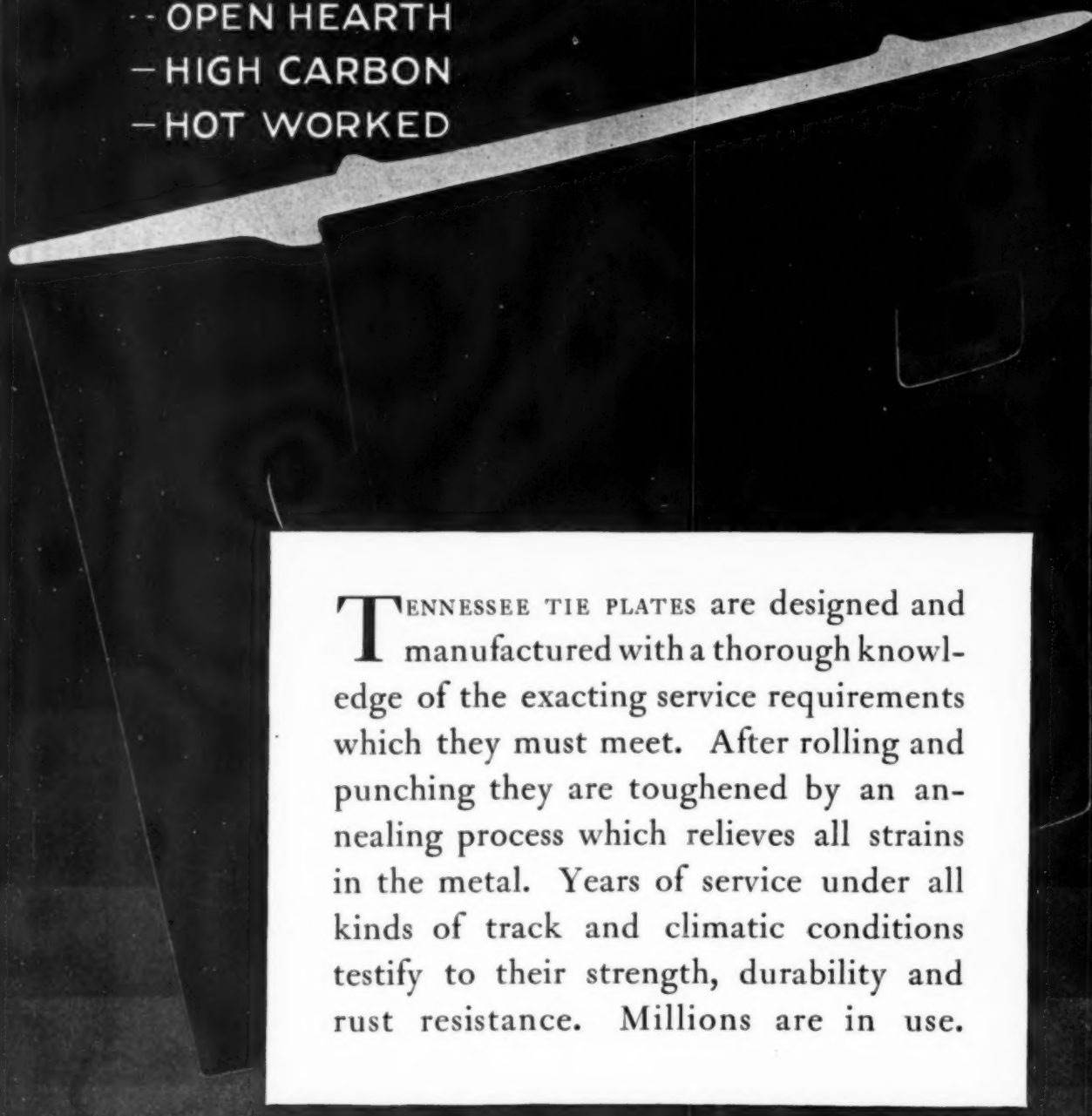
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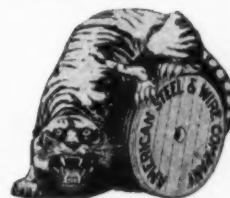
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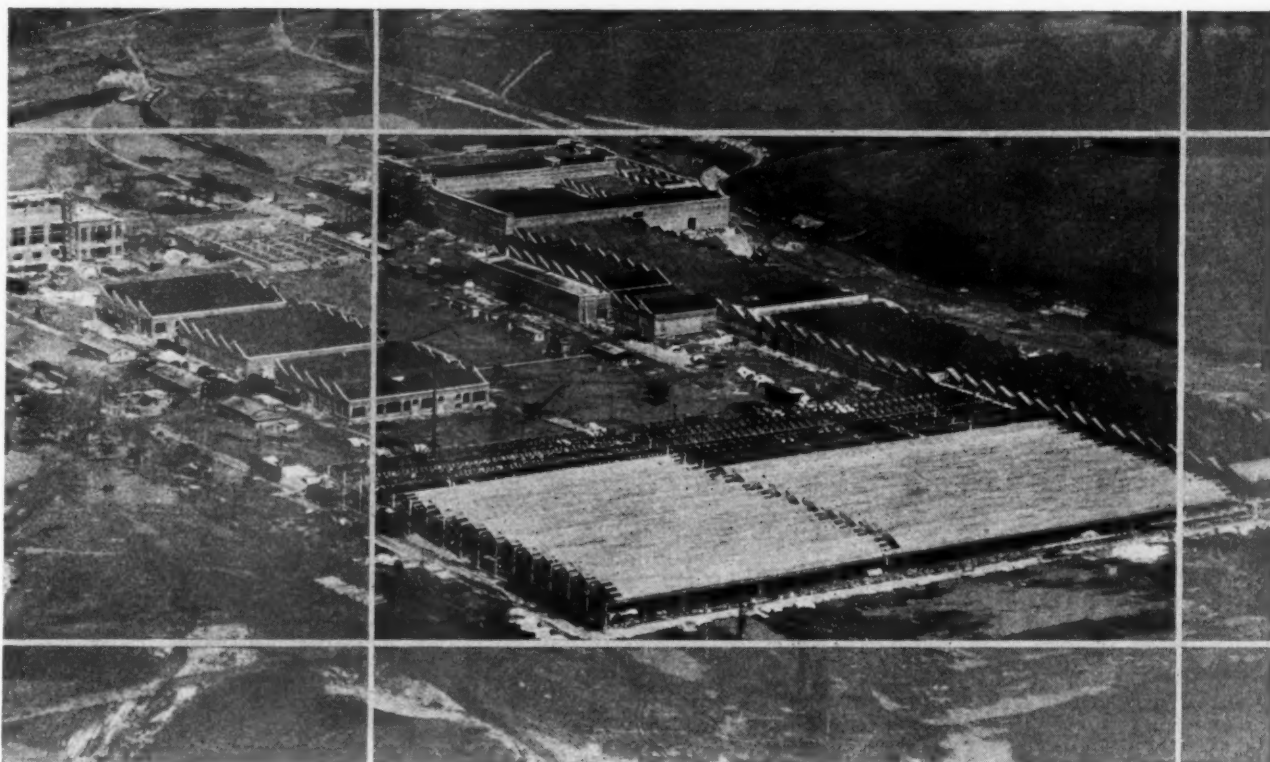


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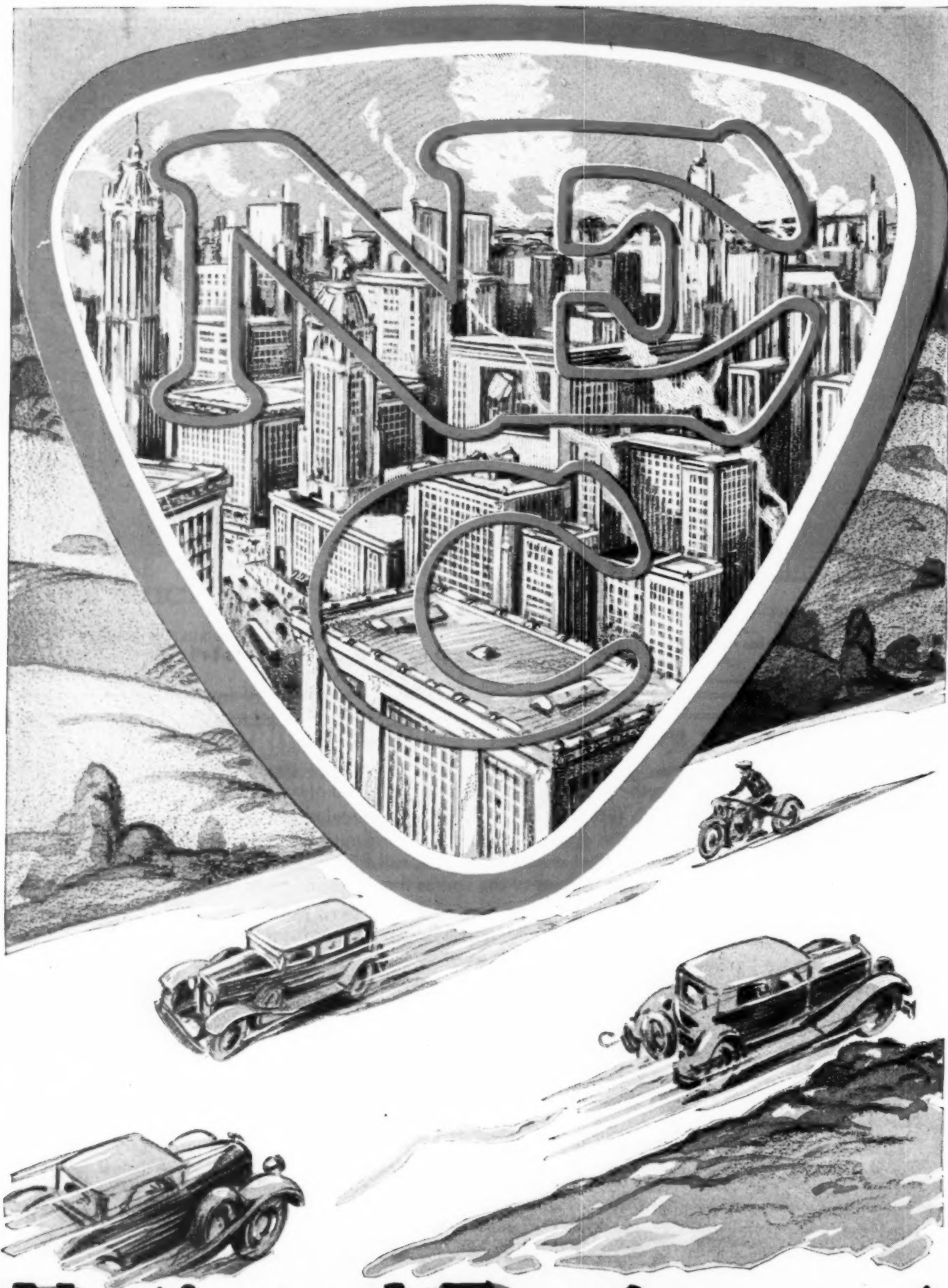
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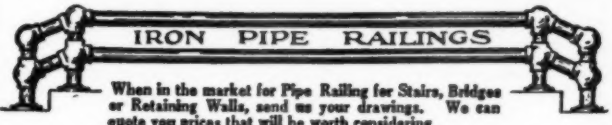
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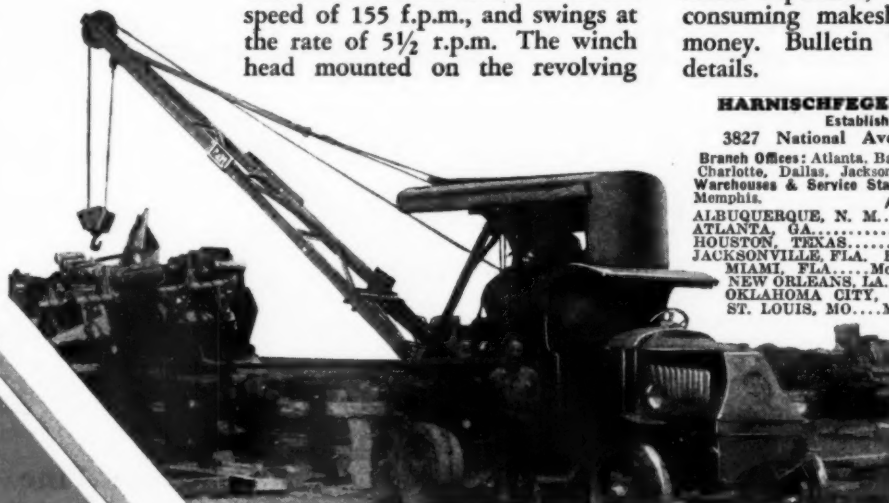
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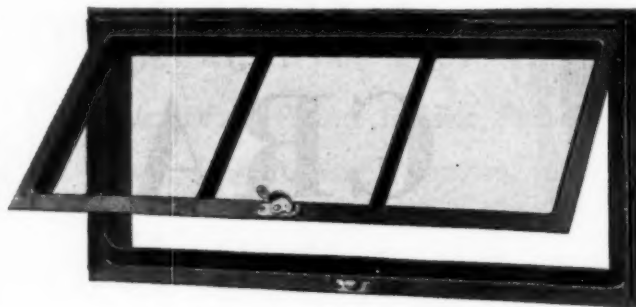
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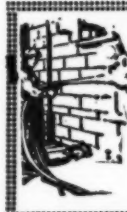


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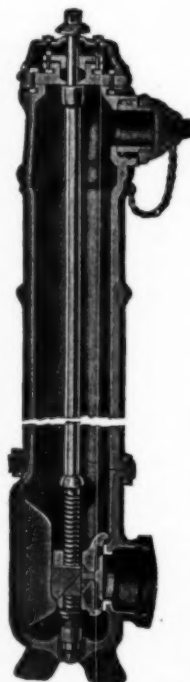
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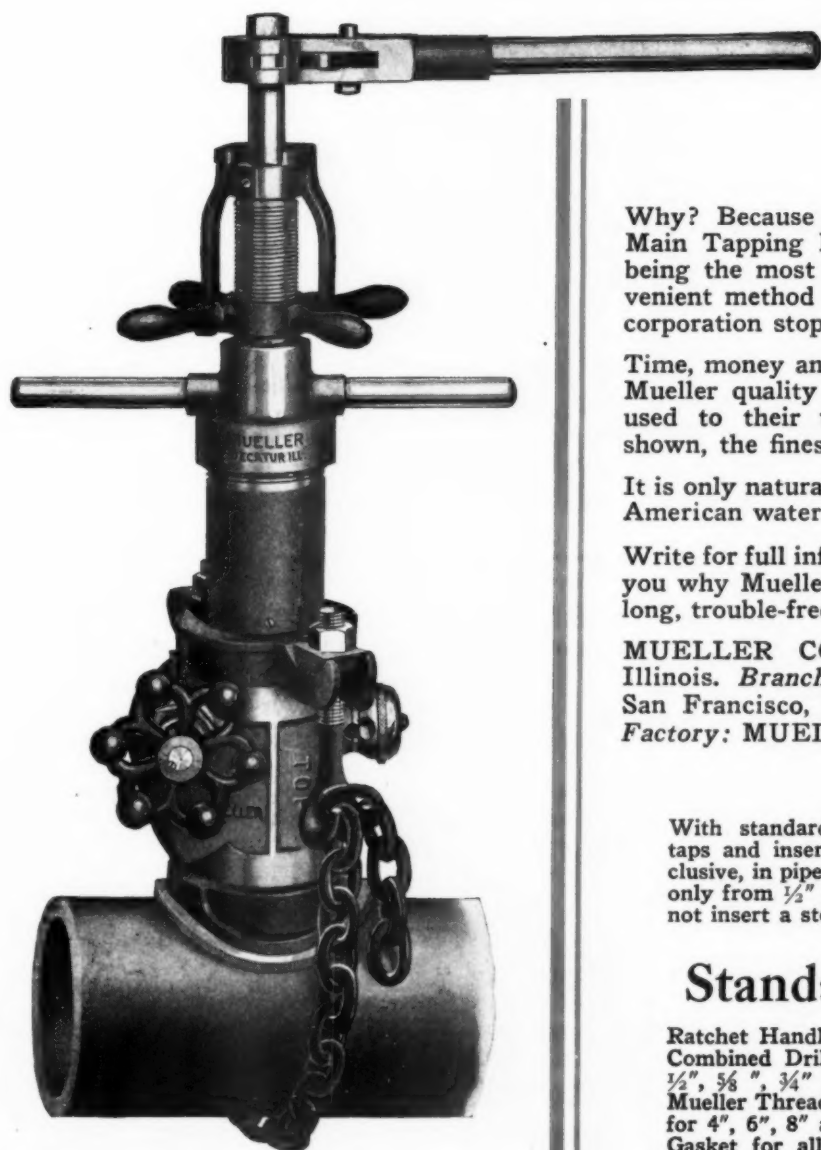
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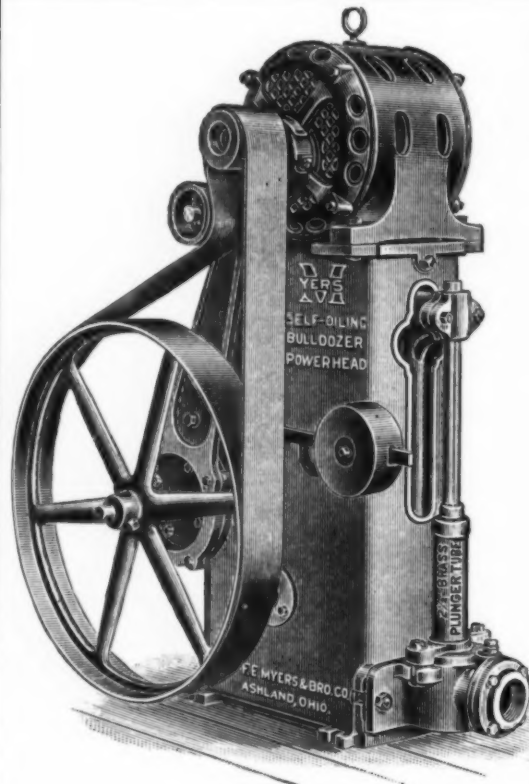
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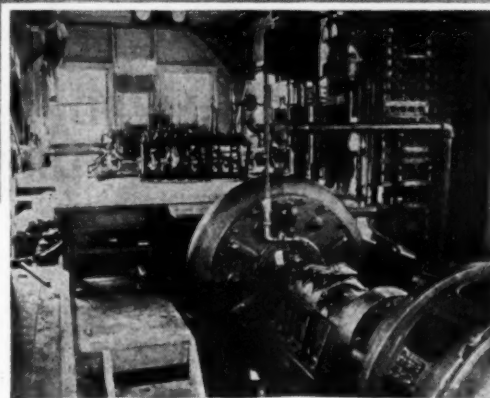
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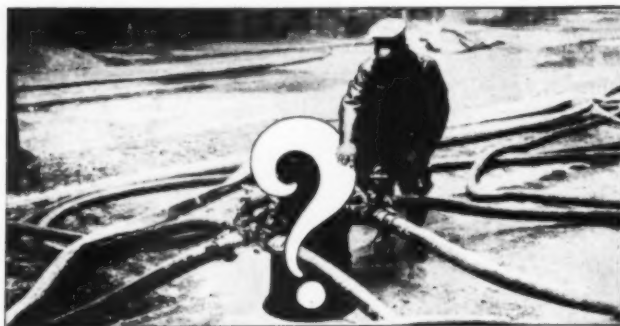


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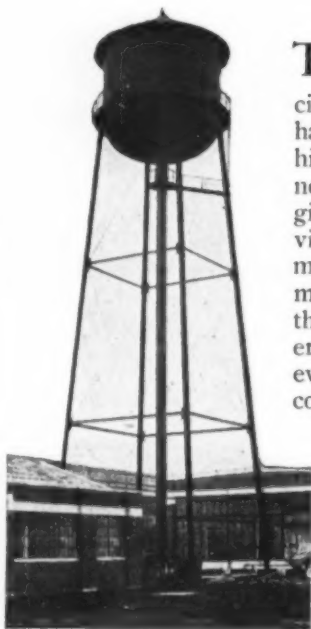
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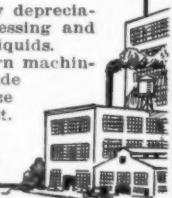
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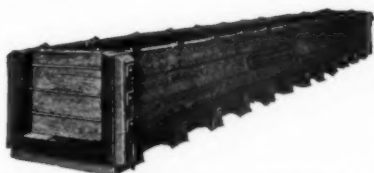
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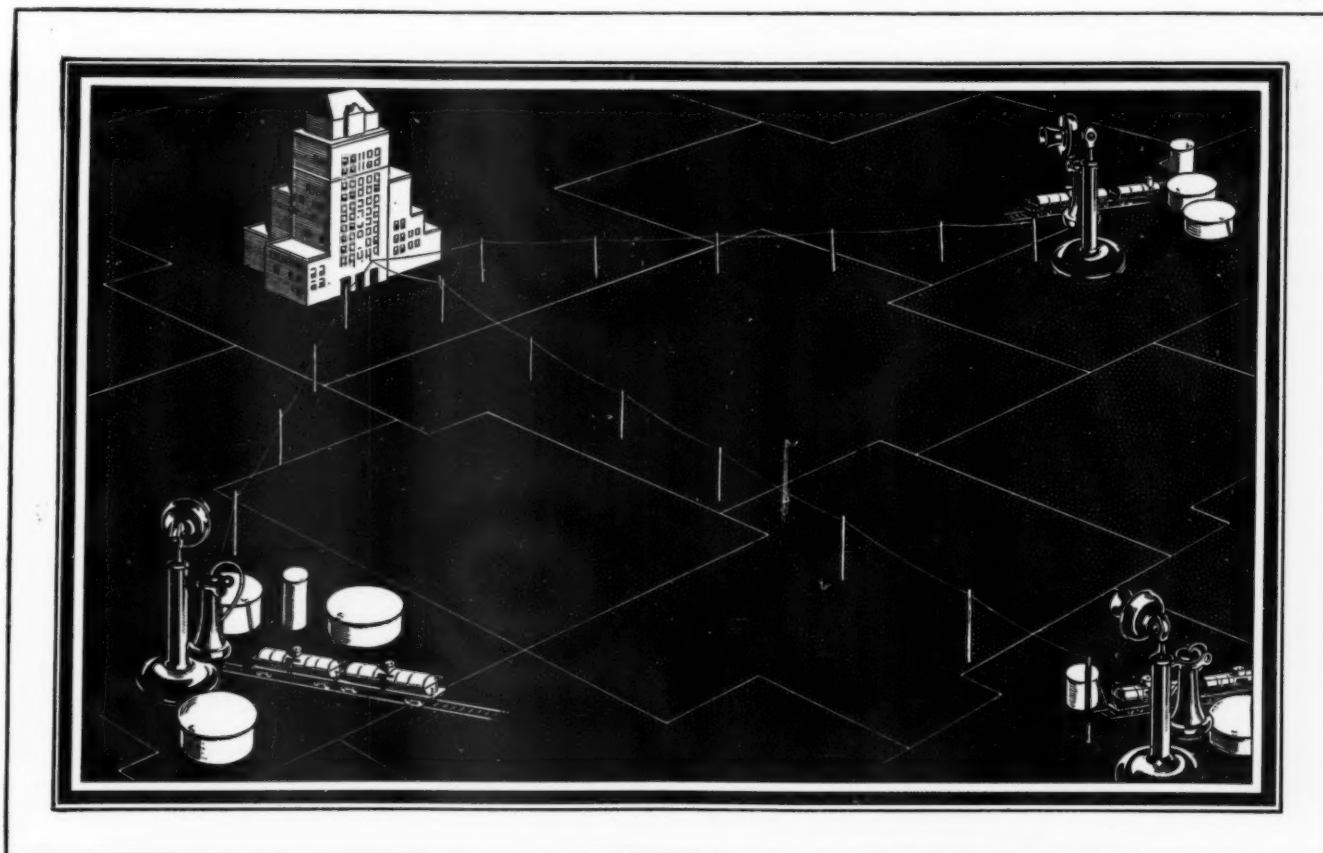
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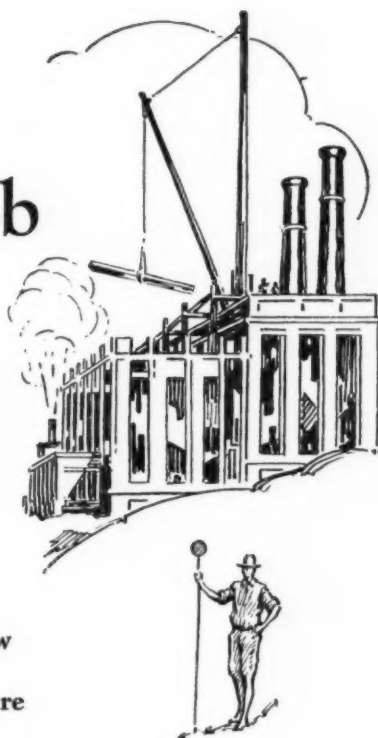
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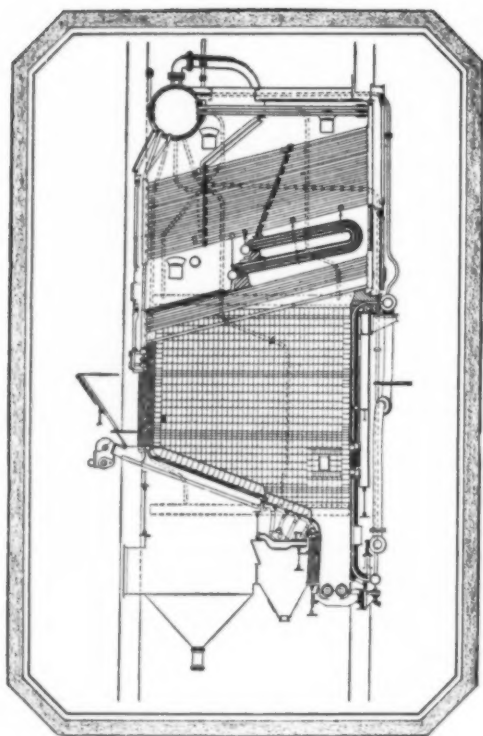
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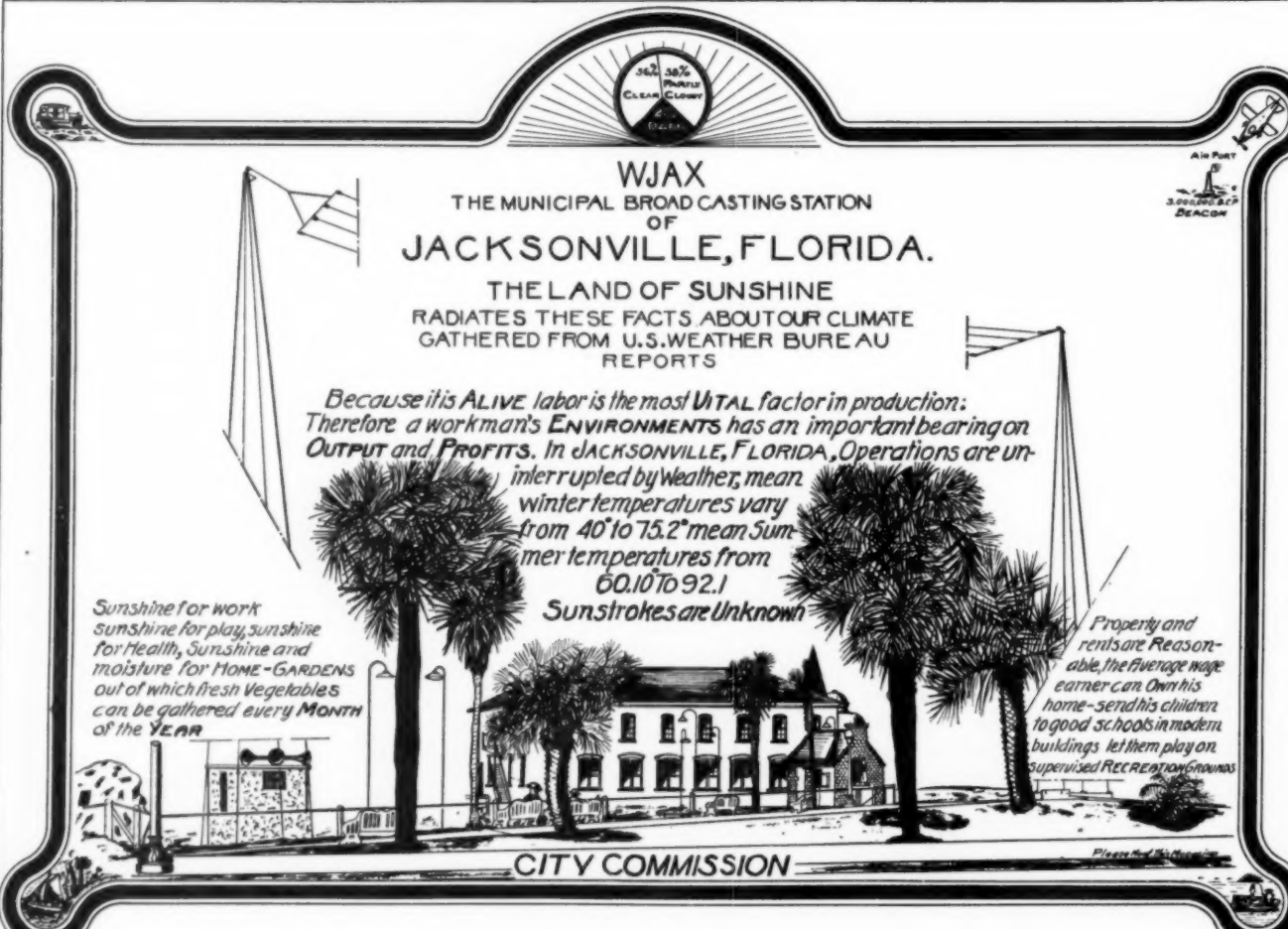
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Devoted to the Upbuilding of the Nation Through the Development
of the South and Southwest as the Nation's Greatest Material Asset

Vol. XCVII No. 21 }
Weekly }

BALTIMORE, MAY 22, 1930

{ Single Copies, 20 Cents.
\$6.50 a Year. }

Growth of Southern Cities

SINCE the dawn of history there have been regularly recorded great migrations of peoples. In the early days, our own country witnessed a movement of population from the Eastern states into the West and Southwest. The most recent migration in this country has been toward the larger towns and cities. When the first census returns for 1930 began to come in they clearly indicated the trend of population toward the larger cities of the country. That trend has been in evidence for some years, but the present census shows that the smaller villages have not made proportionate gains with the larger cities in their territory. In other words, many small towns have become smaller, while the larger towns and cities have made enormous population gains since 1920. The Columbia State remarks that unless the village situated on the railroad has a strong "back country, or some industry to support it," the very small community seems to be without a future.

That those small towns which have shown population gains have profited by the bringing in of industries is demonstrated at many points in the South. Many Southern communities have gained through the decentralization of industry in older established manufacturing centers of the North and West. In some instances equipment, especially in the textile industry, has been moved bodily to Southern locations and there installed in new plants. Every new factory thus added to the community helps to swell its population.

Thousands of people, unable to make a living on the farms are moving to the larger centers, bringing about as pronounced a migration as has taken place in any previous period of our history. True, this movement is confined chiefly to circumscribed areas, but the change has taken place and brought conditions not experienced before in this country.

What is to be the future of the country's village life and the effect upon all of us of making America more urban than rural in viewpoint? One result is certain—the people get together more, and even those living in rural districts, with the aid of the automobile and good highways, are thrown into close contact with city life. The favorable side of this picture is that people moving into larger population centers have been able to enjoy greater advantages in educa-

tion and have found opportunities for self-improvement only to be secured in larger cities.

The Atlanta Constitution reminds us that the growth of towns and cities is not a phenomenon; it is the natural evolution that comes in a wide change of industrial conditions. The rapid growth in the Southeastern and Southwestern states of enterprises that require urban locations and conditions of living and transport, fully accounts for the trek of workers from the farming areas to the industrial centers, whether large or small. In citing the fact that the same conditions produced like results in the Eastern states a century ago, the Constitution discusses the growth of the industrial areas of the South and emphasizes its significance thus:

"It means growth and improvement for both those who remain on the farms and those who have gone into the factories, mills and other non-agricultural industries. The factory populations are taken from food production, and increase the consumers of the diversified products of well-managed farms. The farmers who know how to farm and raise other than one-crop produce obtain near and quick markets for their foodstuffs. The industrial labor is recruited from native stock and keeps out a large influx of foreign labor with ideas alien to the environment, and that is good for the locality and the state.

"In the long showing the census of the South promises to prove that the industrialization now going forward rapidly will work out a greater and more prosperous South than any of us have hitherto dreamed possible. The inexorable economics of the situation will enforce a dual and co-operating industrial and agricultural modus vivendi."

Striking population gains are indicated by the preliminary census figures reported for many cities of the South. In some instances the population has more than doubled in the last ten years. In this connection it must be remembered that the Government's figures cover only the incorporated area as the official city population. If to this population be added the people living in the immediate and outlying suburban districts, who are certainly as dependent upon the city proper and are as much a part of the city's population as are those residing within the corporate area, a much larger total would be obtained. As one illustration, the population of the borough of Atlanta is 266,557, compared with 203,000 in 1920, while "Greater Atlanta," which comprises the immediate surrounding residential and trade territory, reports a population of 353,000 for 1930.

Some of the larger Southern cities on which pre-

liminary population figures have appeared are: Birmingham with a reported population of 257,657, as compared with 178,806 in 1920, and claiming a metropolitan population of 350,000 for 1930; Dallas, 260,397, as compared with 158,976 in 1920; Houston, 290,811, as compared with 138,276 in 1920; and Memphis with 252,049 inhabitants, as compared with 162,351 in 1920.

City	Population Census 1920	Population Preliminary Census 1930	Indicated Gain Since 1920
Ada, Okla.	8,012	11,260	3,248
Albany, Ga.	11,555	18,000	6,445
Amarillo, Texas	15,494	43,094	27,600
Anderson, S. C.	10,570	14,130	3,560
Anniston, Ala.	17,734	22,280	4,546
Ardmore, Okla.	14,181	15,789	1,608
Athens, Ga.	16,748	18,081	1,333
Atlanta, Ga.	203,550	266,557	63,007
Augusta, Ga.	52,548	60,000	7,452
Baton Rouge, La.	21,782	26,666	4,884
Bessemer, Ala.	18,674	20,695	2,021
Birmingham, Ala.	178,806	257,657	78,851
Bristol, Va.-Tenn.	14,776	20,849	6,073
Brunswick, Ga.	14,413	20,000	5,587
Charleston, W. Va.	39,608	60,411	20,803
Chickasha, Okla.	10,179	14,019	3,840
Clarksburg, W. Va.	27,869	28,849	980
Clarksdale, Miss.	7,000	10,075	3,075
Columbia, S. C.	37,524	49,517	11,993
Columbus, Ga.	31,125	42,871	11,746
Columbus, Miss.	10,501	10,734	233
Dallas, Texas	158,976	260,397	101,421
Danville, Va.	21,539	22,071	532
Elizabethton, Tenn.	2,749	8,044	5,295
El Paso, Texas	77,560	101,975	24,415
Enid, Okla.	16,576	26,331	9,755
Fairfield, Ala.	5,003	11,043	6,040
Fayetteville, N. C.	8,877	13,115	4,238
Florence, Ala.	10,529	11,735	1,206
Fort Smith, Ark.	28,870	31,434	2,564
Frederick, Md.	11,066	14,415	3,349
Gadsden, Ala.	14,737	23,280	8,543
Goldsboro, N. C.	11,296	14,971	3,675
Greensboro, N. C.	19,861	53,422	33,561
Greenwood, Miss.	7,793	11,095	3,302
Griffin, Ga.	8,240	10,302	2,062
Gulfport, Miss.	8,157	12,520	4,363
Hot Springs, Ark.	11,695	20,115	8,420
Houston, Texas	138,276	290,811	152,535
Huntington, W. Va.	50,177	75,725	25,548
Jackson, Tenn.	18,860	22,118	3,258
Johnson City, Tenn.	12,442	25,073	12,631
Jonesboro, Ark.	9,384	10,309	925
Joplin, Mo.	29,902	31,250	1,348
Knoxville, Tenn.	77,818	104,898	27,080
Lafayette, La.	7,885	14,622	6,737
Lake Charles, La.	13,088	15,753	2,665
Lakeland, Fla.	7,062	18,544	11,482
Lawton, Okla.	8,930	12,115	3,185
Lubbock, Texas	4,051	20,612	16,561
Lynchburg, Va.	30,070	40,559	10,489
Macon, Ga.	52,995	61,000	8,005
Memphis, Tenn.	162,351	252,049	89,698
Mobile, Ala.	60,777	65,817	5,040
Monroe, La.	12,675	26,002	13,327
Montgomery, Ala.	43,464	65,801	22,337
Nashville, Tenn.	118,342	147,045	28,703
Pine Bluff, Ark.	19,280	24,602	5,322
Raleigh, N. C.	24,418	37,506	13,088
Roanoke, Va.	50,842	69,096	18,254
Rock Hill, S. C.	8,809	11,244	2,435
Rome, Ga.	13,262	21,668	8,406
Savannah, Ga.	83,252	100,000	16,748
Spartanburg, S. C.	22,638	28,525	5,887
Springfield, Mo.	39,631	56,714	17,083
Texarkana, Ark.-Texas .	19,700	27,328	7,628
Tuscaloosa, Ala.	11,996	20,610	8,614
Valdosta, Ga.	10,783	18,000	7,217
Waco, Texas	38,500	52,825	14,325
Wheeling, W. Va.	56,208	61,752	5,544
Wilson, N. C.	10,612	12,609	1,997
Winchester, Va.	6,783	10,944	4,161

Road Builders of Nation to Meet in South

THE 1931 show and convention of the American Road Builders Association will be held in St. Louis. Decision was reached at the annual meeting of the Board of Directors of the association held last week in Washington. In preceding years the show has been held at Atlantic City, Cleveland and Chicago, largely because of the exhibition floor space and hotel accommodations afforded. Other cities have unceasingly campaigned to "land the show" and this year the successful contestant had opposition from Houston, Kansas City, Atlanta, New Orleans, Cleveland, Chicago, Atlantic City and Toronto, Canada. For a number of years the MANUFACTURERS RECORD has vigorously urged that the convention be held in a Southern city, pointing out to the directors of the association the educational value of the show toward stimulating road-building activities in several of the backward states and for encouraging continued heavy expenditures for such work in those states that have undertaken big-scale highway improvement programs, contending that the public must be kept "sold" on the building and maintaining of highways to prevent motor transportation paralysis and thus curtailment of motor vehicle operation due to inadequate facilities.

Because of excellent transportation facilities and the comparative nearness of St. Louis to most sections of the South and Southwest indications are that local contractors, engineers and highway officials will figure prominently in the 1931 attendance registration. These representatives will return to their respective fields of operations with a keener appreciation of the road-building industry and what it means for future upbuilding of the resources of the section. The publicity given the show in the metropolitan cities, where previous shows have been held, will be given the St. Louis show many times over by Southern newspapers. The press of the South understands the importance of good roads in upbuilding communities and senses the educational value of such an annual display of labor-saving tools. Moreover, it recognizes the influence for good exerted by engineers, contractors and officials who meet in convention with the express desire of advancing the science of road-building and making the taxpayer's dollar go further, in building increased mileage and providing roads to render more from a service standpoint, thereby creating facilities that become paying investments.

St. Louis is to be congratulated on securing the 1931 highway show and convention. The city's strategic location, the commodious exhibition facilities afforded by its Highlands Arena, and adequate hotel accommodations—all these figured in the decision. Three buildings in the Arena group provide 247,800 square feet of floor space for exhibit purposes, and during the coming summer a structure to house convention sessions will be erected.

Southern cities that have sought for several years to induce the road show management to come South can well put forth new effort. They should consider, however, the need not only for suitable hotel accom-

modations, the transportation facilities for thousands of delegates and the 500 or more carloads of exhibits, but also for the provision of at least four acres of covered display space, together with nearby outdoor exhibition grounds.

The various contractors' associations, state, county and city highway officials and engineering organizations of the South whose membership is affiliated in one way or another with the road-building industry would do well to work aggressively for extensive representation at the forthcoming show and convention, that the South's interest in highway construction may be forcibly manifested and the way thus paved for future shows in the territory from Maryland to Texas.

Power Companies and Railways Bring Industries to the South

THE industrial development work that is constantly being done by the power and railway companies of the South has brought many industries into the Southern states and has aided those industries in selecting the most advantageous locations, thus providing in that respect fundamentally sound conditions on which to build prosperity for themselves and the whole South. Examples of this sort of constructive work are abundant and are constantly coming to light, the advertisements of the Georgia Power Company and the announcement of the \$10,000,000 paper mill for Panama City, Fla., being two of the most recent.

The Georgia Power Company is advertising the advantages of the state as a whole. To the paper industry it says: "Where the pulp wood is, the paper industry must locate * * * Here trees grow twice as fast. Rapid reforestation in Georgia creates a permanent source of supply. It takes half as much acreage to supply a given volume of paper production. A mill located in this state can * * * be sure that this move is the last move."

The other advantages Georgia offers to make up a well rounded situation for paper manufacture are adequately covered.

Similarly the same company is going after the furniture industry, for where forests regrow rapidly, other factors being favorable, all forest products industries have the greatest chance for success. Besides the rapid re-growth of forests, other advantages listed are: "Efficient labor—willing, adaptable, with the natural skill which is the Anglo-Saxon's heritage. Low taxes. Adequate and dependable power. Natural gas. Equable climate. Swift transportation by road, rail, water and air. These and many more factors are a big plus to the standing timber."

A third advertisement of this series is aimed at the nation's ceramic industry, and points out that Georgia is a major producer of fine white china clays, and that "no costly overburden stripping, no expensive mining methods pull up the price of this raw mate-

rial. In Georgia you put a mechanical shovel to work, and up comes the clay you need. And the surface of this great field has hardly been scratched. There are sedimentary kaolins to supply the world for generations to come. There are clays of every type nearby, so that blending will produce exactly the combination you need for your particular branch of the industry."

All of these advertisements close with the statement that thorough surveys of the industries referred to have been made by the company's industrial department, and detailed information will be available to executives.

The advertisements we have mentioned are in no sense unusual; they are merely the latest of their sort that have come to our attention. The other power companies and most of the railways of the South have been working vigorously and effectively, through advertising, through surveys and through industrial development agents, to bring industries to their lines; and many important achievements tell the story of their success.

In the ceramic field it was realized several years ago that the properties of Georgia clays were little understood and that no ceramic engineers were trained in their use. Clays alike in appearance differ widely in performance; and much research on Georgia clays was needed before they could come into their own in the ceramic industry. One of the men who early grasped this situation was J. M. Mallory, industrial agent of the Central of Georgia Railway; and very largely as a result of his untiring efforts, backed up by the power of the Central of Georgia, the Georgia School of Technology was able to secure an appropriation for the establishment of a course in ceramic engineering and the construction of an experimental and research laboratory to work on Georgia clays and determine just what uses the various grades are good for; and also to develop the best practices in handling them. This laboratory under the capable direction of Dr. A. V. Henry, and constantly aided and encouraged by the industrial division of the Central of Georgia Railway, has been able to accomplish more than would have been possible had it been forced to depend entirely upon the appropriation granted the Georgia Tech by the legislature. The result is that it has done a fine work in paving the way for development of a ceramic industry. With the foundation thus laid, partly through the efforts of a Georgia railway, the Georgia Power Company is working to develop what should be a highly profitable group of industries for the state.

In the paper industry, Georgia has not made the progress to which the state is entitled; but next door, in Alabama, great mills have been built, and southwest of Georgia in Panama City, Florida, a \$10,000,000 mill is to be built by the Southern Kraft Corporation, a subsidiary of the International Paper Company. This is not the International's first paper mill on the Gulf Coast, and the Alabama Power Company did yeoman service in convincing that great paper-making concern that it could do better in the Southern pine forests where a perpetual supply is available.

than it could in the vast but slow-growing spruce forests of Canada. The Alabama Power Company brought the International to Mobile, where its new mill is in operation.

Panama City was selected largely because of the activity of the Gulf Power Company. That mill will start with an initial unit to cost \$5,000,000 and to have a capacity of 200 tons of paper per day. A good idea of the magnitude of the project is given by the report that 300,000 acres of land will be acquired and put under scientific forest management to supply the necessary pulp wood. As a matter of fact, the acreage necessary to maintain a 400 ton mill, the ultimate capacity planned, will vary from 300,000 to 800,000 according to location; and if the Southern Kraft Corporation acquires only 300,000 acres it will in all probability buy large quantities of pulp wood in addition to all it can cut on its own lands.

Like the Southern Kraft Corporation, every paper mill that comes to the South expects to settle there and cultivate its pulp wood indefinitely, thus forever putting an end to the destructive, nomadic habits the pulp industry has had in the past, in localities where reforestation was too slow and costly to be profitable. And in this phase of the development on a lasting basis of the South's vast timber resources, as in the growth of many other industries, the power companies and the railways have done and are doing a great work.

Combatting Pessimism

ALTHOUGH business is improving, there are many persons who can see only the shadow that dull industries throw across the path of progress. Lack of information as to what is really going on throughout the country in promoting greater activity is often responsible for the pessimistic tone of some individual concerns.

A correspondent, writing from the Middle West on this subject, states that he has been able to cheer up some of his business friends by calling attention to the weekly summaries of industrial and building activities under way in the South, as reported by our DAILY CONSTRUCTION BULLETIN. He states that the reaction was immediate, for apparently they had no idea of the scope of the work going on in the South and Southwest. It is the individual or organization alive to what other sections of the country are doing, even though local conditions are not what they should be, who sees the silver lining of prosperity underneath the cloud of dullness.

With an annual income of approximately \$80,000,000,000, the American people are a long way from the poorhouse. Let's go out and get some of the business this enormous income produces.

Hands that ope but to receive empty close; they only live richly, who can richly give. Love is sweet in any guise, but its best is sacrifice.—Whittier.

Financing Small Local Industries

THE recent editorial in the MANUFACTURERS RECORD on "Financial Cooperation Needed for Development of Small Local Industries," has brought forth some interesting comments. It is shown, for instance, that it is the fault not only of local investors and banking interests that small local industries fail to secure needed financial support, but the local industries, themselves, fail to furnish adequate or convincing information in regard to their soundness or as to possibilities in the field they occupy.

A. S. Keller, manager of the Industry Division of the Chamber of Commerce of Pittsburgh, states that the thought expressed in the editorial is much in line with work which his organization is doing. In a recent discussion of "The Problem of Capital" published by the Pittsburgh Chamber, certain facts were emphasized in their application to small industries. In the course of the article it was stated that a considerable number of local concerns had requested capital in amounts ranging from a thousand to a quarter of a million dollars. Of course, the Chamber does not attempt to supply funds; it interests itself only in having finances secured for worthy concerns needing help. Cooperation of local banks, investment houses and individuals is sought.

Some of the difficulties encountered in aiding small local industries are mentioned. The Industry Division reports that some of the propositions put forth have not been financially sound. It cites the history of one concern which applied for \$25,000 additional capital, yet its balance sheet showed accounts receivable approximating one-half its annual sales. The concern manufactured 24 different products, half of which were found to show extremely low sales, and this group of products had to be stocked by the local concern for an extended period. In an attempt to analyze this business, it was found that a more standardized type of product would lessen overhead and reduce unit cost. The concern also was induced to place its accounts receivable in the hands of a good collection agency.

Among other illustrations of the difficulty of securing capital for small industries, the financial statements of four different concerns were found unfavorable from a banking standpoint when requests for additional capital were made. In these particular cases it was arranged to aid these concerns through commercial financing companies. In other instances involving a number of requests for additional capital, investigation disclosed that what really was needed was an adjustment of manufacturing policies.

Thus, the weaknesses disclosed through investigation of quite a number of small companies applying for capital indicated that concerns seeking new or additional capital must, themselves, be in a strong position and have the right setup before they could expect to receive the consideration of local bankers.

Industrial growth is from within rather than from without, and through the development of small local industries a community ordinarily derives the greatest benefit.

Work of Federal Farm Board in the South

By

RICHARD WOODS EDMONDS.

WHAT is the Federal Farm Board doing for agriculture in the South? Before any answer can be made to that question it should be pointed out that the Farm Board can function only through cooperative associations of farmers; and that where adequate and qualified organizations do not already exist, they must be brought into existence. The reason for creating the Federal Farm Board was the fact that in general farm cooperatives are small, weak and utterly inadequate to the tasks before them—a condition which presupposes a long, slow formative period before any very large results can be shown; and it is therefore too early to expect any striking array of achievements to the Board's credit.

While most of the Board's accomplishments in the 10 months of its existence are still in an embryonic stage, a few of them have advanced far enough for their features to be discernible, while others at least indicate the beginnings of definite activities. It is not believed that any one expected that the agricultural marketing act would solve the agricultural problems of the country in 10 months, yet some critics would demand its repeal for failure to do so within that time.

Mention of the Board in the South immediately suggests cotton, and the \$30,000,000 American Cotton Cooperative Association—the central marketing agency composed of various state cooperative associations handling short staple cotton. Since cotton is King of all Southern crops, and since there were already a number of state cooperatives organized to serve His Majesty, the coordination of these local agencies was a logical starting point for the Board in the South. All of them, except the Staple Cotton Cooperative Association of Greenwood, Miss., which handles only long staple, were brought into the central organization, and the Greenwood association is working in harmony with it.

The general public is fairly familiar with the chief features of the American Cotton Cooperative Association's market activities this year. That it loaned more money on cotton than the staple would bring in the open market has been a subject of universal comment and much criticism. That its operations caused spot cotton to sell higher than cotton for future deliveries—an unnatural phenomenon—is also generally known. It is not so generally known that this reversal of the ancient and natural order of things cost a good many cotton mills many thousands of

dollars, and that the mills which suffered most were the ones most scrupulous in hedging their purchases in order to avoid the speculative risks of price fluctuations. Cotton mill men have been surprisingly reticent on this subject in public discussion, though not at all so in private conversation. I don't know why this should be, unless it is on the theory that if the Board has calf brains, all it needs to hang itself is enough rope; while if it has human brains, the mills will need a more formidable weapon than any protests they have at hand. Be that as it may, by comparison with the grain men, and a few other groups outside the South, they have been surprisingly self-contained.

So far as cotton farmers are concerned, the Board seems to have made headway, for while about 100,000 of them were members of cooperatives last January, today about 200,000 are signed up.

One big feature, a vital feature, of the Farm Board's work is the adjustment of production to market requirements. For many years the bankers of the South, or some of them, and other agencies immediately interested in agriculture, have talked about reversing the traditional direction of credit pressure and refusing loans to farmers unless they would plant at least enough food and feed to live at home; and a few bankers have operated on that plan. Last winter the Farm Board set out to persuade bankers to exercise their natural leadership in this fashion; and reports indicate that never before have credit agencies gone so far in this direction as they have gone this spring.

In answer to the question, "What is the Farm Board doing for the South?" several other side lines of their activities should be discussed if space would permit, but while most of the Board's work in the South has centered on cotton, its activities in organizing cooperatives for other crops must get brief attention.

Wool is an important product of a few of the Southern states, notably Kentucky, Texas and Missouri. The National Wool Marketing Corporation, a \$1,000,000 central sales agency for wool and mohair, was organized by the wool and mohair cooperatives under direction of the Farm Board. Boston is the great wool market of the nation, and instead of attempting to create a new market agency, the Board selected one of the established Boston houses to

act as agent for the new national producers cooperative. The new corporation has already contracted with its member associations for 60,000,000 pounds of wool, an increase of more than 100 per cent over the amount cooperatively handled last year. It expects to handle 100,000,000 pounds this year, or about one-third the total wool clip. If the storm of protest that has come from the wool merchants of Boston is any forecast of the value to wool producers of the new organization, then it should make all of them wealthy.

The Board has given financial assistance to dairy cooperatives in Virginia; to tobacco growers in Virginia, the Carolinas and Georgia; to citrus growers of Florida for a facilities loan; and to rice growers of Arkansas, Louisiana and Texas.

Much of this assistance has been extended on a temporary basis, pending completion of organizations that can qualify for more substantial aid. Live stock producers, potato and rice members of the Board are working to perfect organizations. No fruits can come from these efforts until another crop year has rolled around. Speed of organization and vigor of action will depend almost entirely upon the farmers themselves. The Board, with its responsibilities for acting as a banker to cooperative associations, can guide and advise; it can even take the initiative in calling together the representatives of existing cooperatives, and in trying to reconcile their differences.

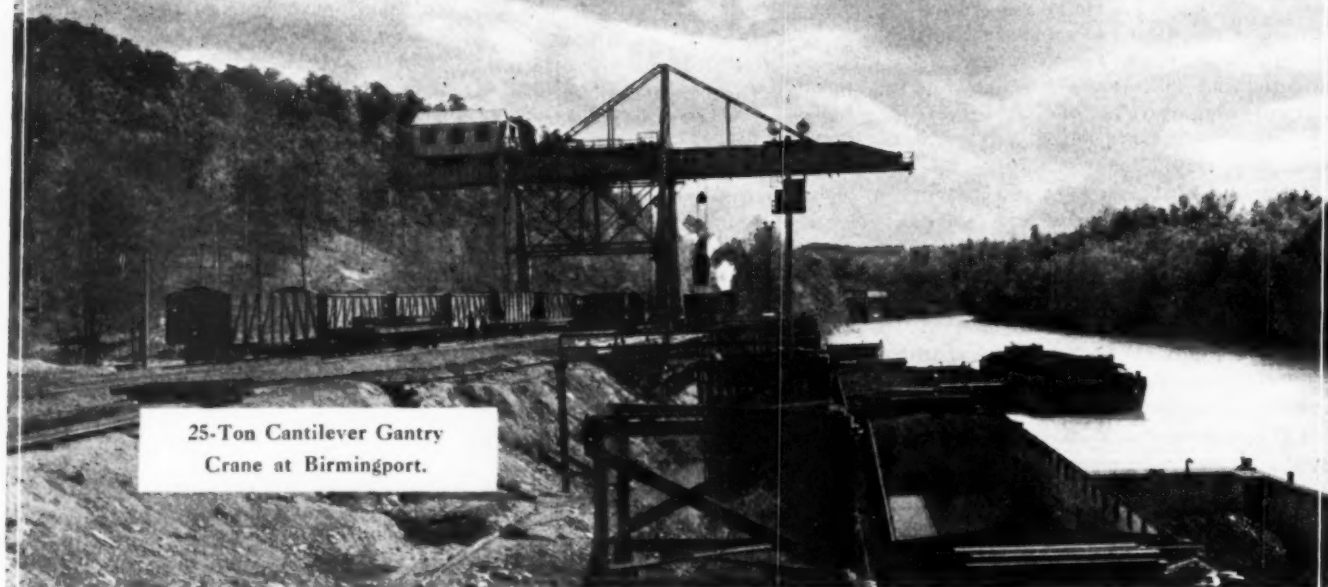
\$20,000,000 Ship-Building Contracts

Newport News, Va.—A contract for three ships has been awarded the Newport News Shipbuilding and Dry Dock Co. by the United Fruit Co., New York, the same company having awarded contract also to the Bethlehem Shipbuilding Corp., New York, for three ships. The cost of the six ships totals approximately \$20,000,000.

\$506,900 Hospital Contract

Galveston, Tex.—General contract to erect a marine hospital here has been awarded by the Treasury Department, Jas. A. Wetmore, Acting Supervising Architect, Washington, to the Ring Construction Co., Minneapolis, Minn., at \$506,900. In addition to the main building, a residence, officers' quarters, nurses' quarters and a garage will be erected.

Tennessee Coal, Iron and Railroad Company Has Its Own Water Transportation System



25-Ton Cantilever Gantry
Crane at Birmingham.

THE Tennessee Coal, Iron and Railroad Company, a subsidiary of the United States Steel Corporation, realizing the advantages of water transportation, began the shipment of its products between Birmingham and Mobile in December, 1927, by inauguration of its own water transportation development and now the bulk of its products moving from Birmingham to Mobile for export and to ports on the Gulf of Mexico is transported in its own barges.

From the company's plant at Fairfield a track extends to Birmingham on the Locust Fork of the Black Warrior River at a point 419.5 miles from Mobile. This 19-mile line is owned by the Warrior River Terminal Company which is controlled by the Inland Waterways Corporation, a government organization. The track connects at Birmingham with terminal tracks installed there by the Tennessee Coal, Iron and Railroad Company.

At Birmingham, the Tennessee Company has provided a 25-ton cantilever gantry crane for the transfer of freight between railroad cars and barges, as well as other facilities including houses for employees. At this terminal, all freight is handled by the company's employees.

The Warrior River waterway between Birmingham and Mobile consists of the Locust Fork of the Black Warrior River and the Black Warrior, the Warrior, Tombigbee and Mobile rivers. The waterway, by reason of the slack water impounded by 17 dams, an unshifting channel, and freedom from ice obstruction, offers a route of low physical resistance to transportation. Eighteen lockages are involved in the movement of freight between Birmingham and Mobile, the minimum length of lock in any one case being 281.9 feet and the minimum width 51.65 feet. Controlling depth of water in the waterway is 8

feet. At present, U. S. Engineers are giving consideration to plans for elimination of some of the locks and dams and for an increase in dimensions of the locks and in the navigable depth to 9 feet.

The fleet operated by this subsidiary of the United States Steel Corporation in the waterway between Birmingham and Mobile consists of the following:

1. Two Diesel towboats named respectively "Warrior" and "Alabama," 140 feet long and 25 feet wide, with 7 feet draft when fully equipped and loaded, electrically driven with pilot-house control, and with 800 shaft horsepower and tunnel stern screw propellers.
2. One Diesel stern-wheel motor boat, the "Nashville B," operated under lease, 131 feet long and 30 feet beam, and 400 horsepower.
3. Twelve steel open-hopper-type river barges, 140 feet long, 25 feet wide and 11 feet deep, with cargo capacity of 625 net tons at 7.5 feet draft.
4. Nineteen steel river barges, 140 feet long, 25 feet wide and 9 feet deep, with double bottom, side and rake compartments suitable for the carriage of fuel oil, and a cargo capacity of 600 net tons at 7.5 feet draft.
5. Eight steel combination river and sea-going barges, 140 feet long, 25 feet wide and 12 feet deep, with a cargo capacity of 525 net tons in the river and 700 net tons at sea.

Size and capacity of craft navigating the waterway are necessarily limited by



800 Horsepower Diesel Tugboat "Warrior"

dimensions of the locks and channel, thus preventing or handicapping the use of river towboats and barges at sea. Therefore the passage of freight through Mobile to points beyond has necessitated rehandling the freight at Mobile into sea-going vessels. Gulf of Mexico ports offer an inviting market for the Tennessee Coal, Iron and Railroad Company's products; so, in order to avoid the expense and other objections to the rehandling of its freight, the company has devised a type of barge which can be used in the gulf as well as in the river. This barge has a model or ship-shape bow and a rake or flat inclined stern, and in substitution for a rudder is equipped with a centerboard or false keel which is raised when the barge is in the river and lowered when at sea. Use of the centerboard eliminates the necessity of a crew for steering the barge. Additional cargo is loaded into these barges at Chickasaw, near Mobile, resulting in a deeper draft at sea. The additional cargo is brought down the river in other barges.

In addition to the foregoing combination river and sea-going barges, the company operates the following in the Gulf of Mexico:

1. Two sea-going tugs, each with triple-expansion engines of 850 horsepower capacity and equipped for burn-



Sea-Going Tug "Hulver"

ing fuel oil, one tug being 142 feet long, 27.5 feet wide and 14.6 feet deep, and the other 142 feet long, 27.7 feet wide and 14.8 feet deep.

2. One sea-going barge (converted ship hull), 261 feet long, 43.5 feet beam and 20 feet



Lock No. 17, on Black Warrior River

Two locks in tandem, each 285.5 feet long, 52 feet wide, 8.5 feet deep on miter sills, and 31.5 feet lift

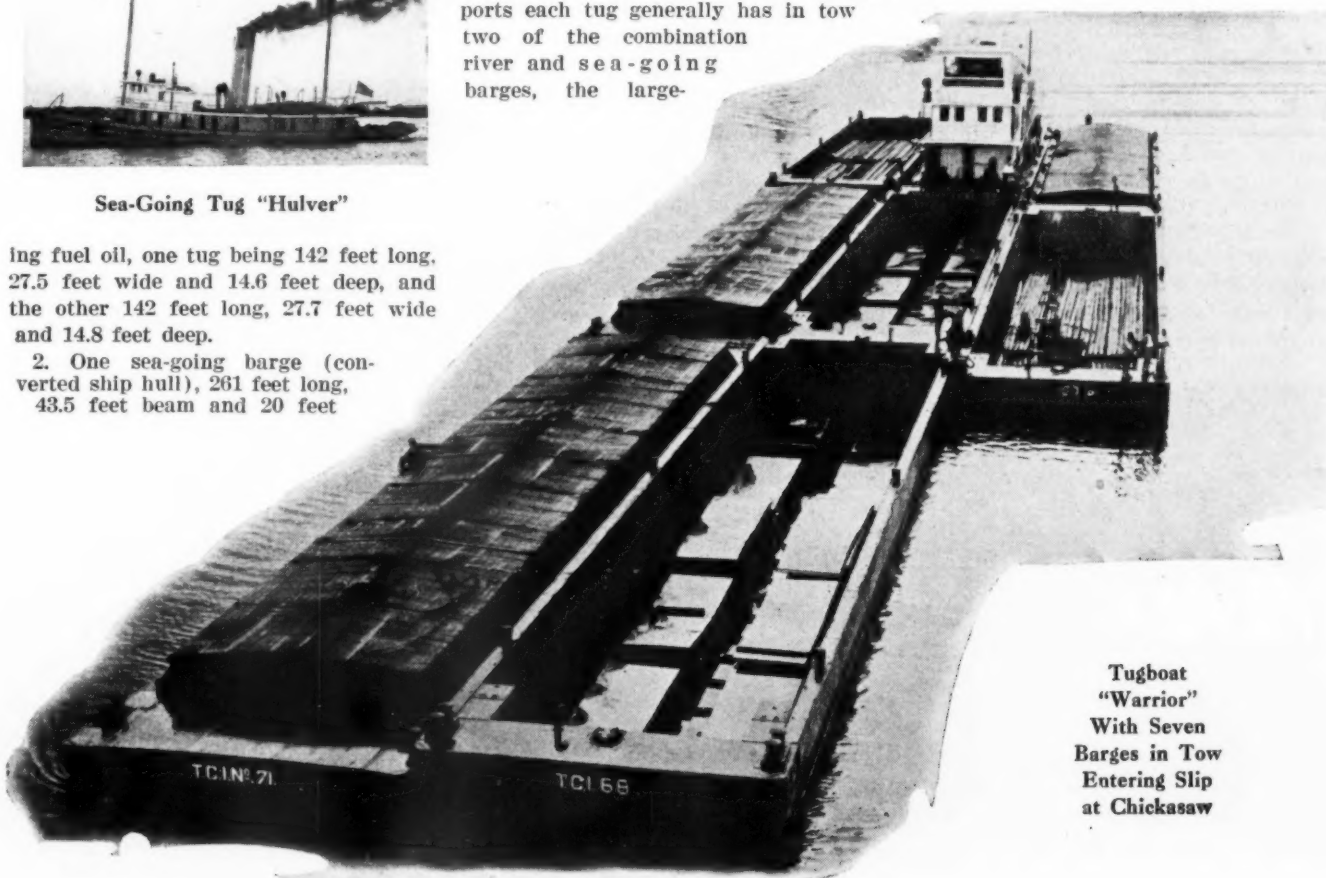
deep, with a cargo capacity of 2600 net tons at 17 feet draft, and equipped with two derricks of 15-ton capacity each.

The tows moved by the "Warrior" and the "Alabama" ordinarily consist of six barges per tow, although as many as seven barges have been taken in one tow, and by the "Nashville B" four barges per tow. About five days' time downstream and six days upstream are consumed between Birmingham and Mobile. The three towboats average a total of seven round-trips per month.

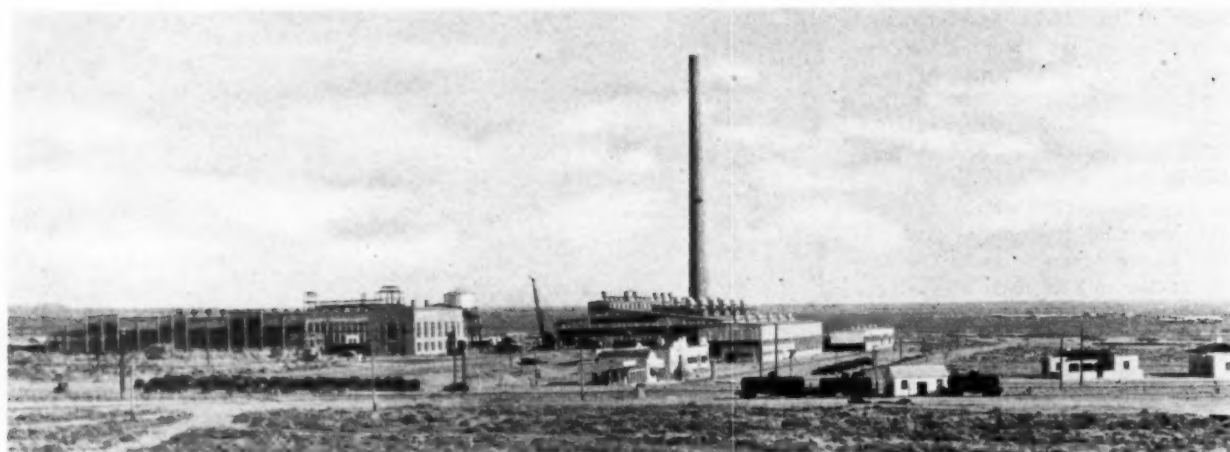
Between Mobile and Gulf of Mexico ports each tug generally has in tow two of the combination river and sea-going barges, the large-

size barge being towed as a separate unit. An average of six round-trips per month is made between Mobile and Texas or Florida ports, three days being required each way between Mobile and Texas ports.

Transfer of cargo between river barges and sea-going barges is accomplished with the Tennessee Coal, Iron and Railroad Company's own equipment and organization at Chickasaw about five miles north of Mobile. Export, import and Pacific coast commodities are transferred usually at shipside.



Tugboat
"Warrior"
With Seven
Barges in Tow
Entering Slip
at Chickasaw



General View of El Paso Plant of Nichols Copper Company.

\$4,000,000 Copper Refinery Opened at El Paso

\$5,000,000 Electric Plant Supplies Power—Natural Gas Line from New Mexico Fields Furnishes Fuel—Rapid Industrial Expansion of Southwest a Factor in Choice of Location

THE Nichols Copper Co., controlled by the Phelps-Dodge Corp., New York, recently completed at a cost of approximately \$4,000,000 a copper refinery eight miles east of El Paso. The Texas site was selected largely because of rapid industrial growth of the Pacific Coast region and of the Southwest and because of the opportunity presented for shipping to Central and South American countries and other foreign countries via Gulf and California ports. Also a plentiful supply of labor, an abundant supply of comparatively cheap electric power, the choice of either oil or natural gas for fuel, and adequate transportation facilities were determining factors in choice of the location.

Raw material for the refinery will be supplied principally by the Calumet & Arizona Mining Co., which together with the Phelps-Dodge Corp., purchased stock to finance the new enterprise. The re-

finery was designed by Archer E. Wheeler, consulting metallurgical engineer, New York. Stone & Webster, engineers, Boston, Mass., handled the sub-station and electrical distribution work. The plant site consists of 500 acres on the Texas & Pacific and the Southern Pacific railroads, adjoining the comparatively new refinery of the Pasotex Oil Company.

The plant will have a capacity of approximately 100,000 tons a year. Main units include: An unloading shed, electrolytic department, copper sulphate plant, sub-station, furnace and casting plant, brick storage and warehouse, machine shop, assay office, administration office structure and laboratory, water and acid storage tanks, balloon flue and stack.

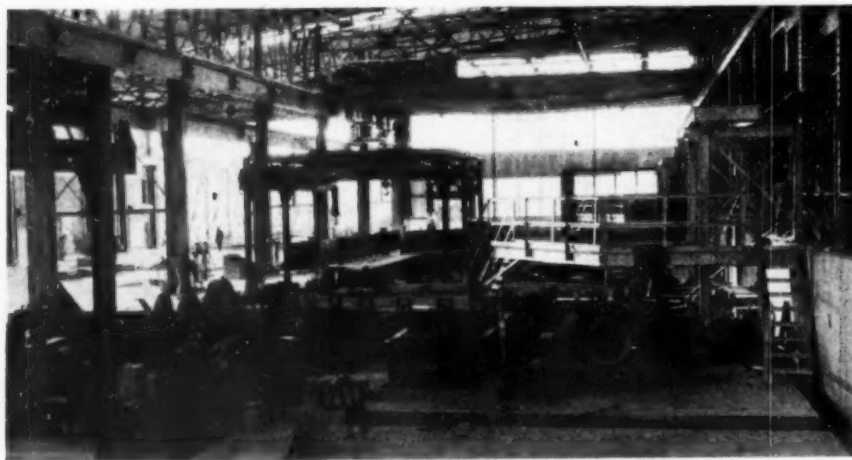
Copper is received at the plant in the form of anodes from smelters at Douglas and at Clifton, Arizona.

Plant buildings are of hollow tile construction or covered with galvanized steel. All machinery is electrically operated with individual motors for the various units. There is a completely equipped machine shop and a woodworking shop, and equipment is provided for handling all sorts of electric repair jobs as well as for welding by gas and electricity.

There are two 250-ton cathode melting furnaces and one anode scrap melting furnace, all gas fired. Each furnace is equipped with a 600 horsepower straight tube type waste heat boiler, steam from which is used for heating the electrolyte and for other processes in the plant. An induced draft fan is employed. Boiler feed-water is obtained from a deep well. Air used for combustion is preheated to obtain economy in fuel consumption. Gas is supplied from a field in Lea County, New Mexico, about 150 miles away; to prevent any delay in operations due to failure of gas supply an oil storage tank with a capacity of 300,000 gallons was erected. The stack is 410 feet high and has a diameter of 13 feet at the top, with an inside diameter at the bottom of 28½ feet.

Power is supplied by the El Paso Electric Co., from a \$5,000,000 plant fired by natural gas, recently completed about 15 miles west of the city. It is received at the plant's sub-station at 2300 volts. The sub-station is equipped with motor-generator sets and air compressors to supply air for the hoists, furnaces, etc.

Firms which furnished major items of equipment and materials or were en-



Casting Floor of Furnace Refinery Building.

gaged in construction work include the following:

Sub-station super-structure and machinery foundations—Anderson Bros., Inc., El Paso

Concrete, electrolytic tanks, piers and footings—Cement Gun Construction Co., Chicago

Stack—Alphons-Custodis Chimney Construction Co., New York

Fence—Cyclone Fence Co., Waukegan, Ill.

Water tanks (200,000 gallons and 600,000 gallons)—Chicago Bridge & Iron Works, Chicago

Casting machines—El Paso Foundry & Machine Co.

Furnace flue insulation—Johns-Manville Corp., New York and Los Angeles

Paved roads and mastic floors—El Paso Bitulithic Co.

Wood block floor—Jennison Wright Co., Toledo, Ohio

Concrete piles in building and chimney foundations—MacArthur Concrete Pile Corp., New York

Building foundations and super-structure—Joseph E. Morgan, El Paso

Electric installations—Stone & Webster Engineering Corp., Boston

Residences and office buildings—H. T. Ponsford & Sons, El Paso

Structural steel—Steel Construction Co., San Francisco, Cal., and Ingalls Iron Works, Birmingham, Ala.

Gypsum roofs—United States Gypsum Co., Chicago



Anode Unloading Stations and Building for Sampling and Weighing.

Barrett specification roofs—Weeks Roofing Co., El Paso

Track scales—Fairbanks, Morse & Co., Chicago

Pneumatic hoists—Curtis Pneumatic Machinery Co., St. Louis

Electrolyte pumping equipment—National Lead Co., New York

Motor generator sets—General Electric Co., Schenectady, N. Y.

Deep well pump—Layne & Bowler, Inc., Memphis, Tenn.

Pumps—Goulds Pumps, Inc., Seneca Falls, N. Y.

Waste heat boilers—Combustion Engineering Corp., New York

Hydraulic variable speed transmission—The Waterbury Tool Co., Waterbury, Conn.

Worm-gear speed reducers—W. A. Jones Foundry & Machine Co., Chicago

Cranes—Milwaukee Electric Crane & Hoist Corp., Milwaukee, Wis.; Bedford Foundry & Machine Co., Bedford, Ind.; Morgan Engineering Co., Alliance, Ohio; Manning, Maxwell & Moore, Inc., New York

Electric locomotives—Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.

Water softening equipment—Graver Corp., East Chicago, Ind.

Furnace air preheater—Carborundum Co., Niagara Falls, N. Y.

Fans—Buffalo Forge Co., Buffalo, N. Y.

Air filter—National Air Filter Co., Louisville, Ky.

Drill presses—Canedy-Otto Manufacturing Co., Chicago Heights, Ill.

Slitter and shears—Peck, Stow & Wilcox Co., Southington, Conn.

Valves—Chapman Valve Manufacturing Co., Indian Orchard, Mass.

Gas burners—Tate & Jones, New York

Motors—Westinghouse Electric & Manufacturing Co.

Laboratory equipment—Laboratory Furniture Co., Long Island City, N. Y.; American Gas Furnace Co., Elizabeth, N. J.; William Ainsworth & Sons, Denver, Col.



Property Entrance and Residences.

NEW ORLEANS' DRAINAGE SYSTEM PROGRESSES

City Carrying Out \$9,000,000 Improvement Program

New Orleans, La.—Two enlarged pumping plants, formally put into operation a few days ago, are an important unit in the \$15,000,000 sewerage, water and drainage improvement program under way here. Plant No. 1 has been increased from a capacity of 2000 cubic feet per second to 5250 cubic feet, and plant No. 6 has been increased from 2800 cubic feet to 6000 cubic feet per second. These plants will drain 5300 and 11,000 acres, respectively. Seven 14-foot pumps were added to the two plants, costing \$20,000 each and each driven by a \$25,000 motor. In addition, seven of the same type pumps will be installed at three other pumping stations and smaller pumps at another.

Improvements to a canal connecting the two pumping stations, involving an increase in capacity from 2500 cubic feet to 6000 cubic feet, are nearing completion at a cost of about \$1,270,000. The Metairie outfall canal from station No. 3 to the lake will be completed by July 1 at a cost of \$70,000, while other drainage facilities have been finished or will be completed soon. The drainage improvement program is being financed by a \$9,000,000 bond issue and is designed to give New Orleans a system unsurpassed by that of any American city and to provide an adequate margin of safety against storm-floods.

Texas Mill May Use Caribbean Pine

Orange, Tex.—By way of experiment to determine the feasibility of importing pine timber from Caribbean seaports for manufacture in its mills here, the Litcher-Moore Lumber Co. has placed

a trial order for two cargoes of 1,500,000 feet each. The cargoes are expected to reach here between July 1 and July 15 and will keep one sawmill in operation about a month. In the event the trial is satisfactory, it is the intention of the company to have six cargoes reach here monthly, which will be sufficient to keep both the local sawmills in operation continuously, employing about 450 men.

Railroad Deal Approved

Winchester, Va.—The Interstate Commerce Commission has granted authority to the Winchester & Wardensville Railroad Co. to issue securities and carry out plans for reorganizing the old Winchester & Western Railroad operating in Virginia and West Virginia. The new company will acquire the old line of about 40 miles in exchange for \$138,000 in common stock and \$662,000 in mortgage bonds.

Development and Future of Hydrogenation

Standard Oil Company to Employ Process for Producing Gasoline—
Building Two Commercial Units in South and One in New Jersey

Baton Rouge, La.—Information recently released by the Standard Oil Development Co., New York, a division of the Standard Oil Company of New Jersey, on "The Development and Future of Hydrogenation," is timely and interesting in view of the fact that the Standard Oil Company is now building three large scale commercial units at Bayway, N. J., Baytown, Texas, and Baton Rouge, La., to employ the hydrogenation process for producing gasoline. The Hydro Patents Co. has incorporated in Delaware to exercise exclusive right to license the process in the United States, paying certain fixed royalties on account of each license granted and also certain running royalties. Licensees will be required also to enter into an agreement with the Hydro Engineering and Chemical Co., a new subsidiary. All issued stock of the Hydro Patents Co. is held at present by the Standard Oil Development Co., but an invitation will soon be issued to various units of the industry to subscribe to the stock, the invitation being extended to those companies thought to be in a position to take advantage of the process because of their refining capacity. The Hydro Engineering and Chemical Co., on request, will make available to licensees of the Hydro Patents Co. the technical knowledge of the Standard Oil Company of New Jersey and I. G. Farbenindustrie Aktiengesellschaft relating to the hydrogenation process. The Hydro Engineering and Chemical Co. will manufacture and maintain stocks of catalysts for supplying licensees of Hydro Patents and will serve as designing and constructing engineers for building and equipping plants using the process.

Representatives of the Standard Oil Co. investigated in 1926 work on liquefaction of coal by hydrogenation, then being developed in Germany, but it was not until the fall of 1929 that work started on the first large scale hydrogenation plant at Bayway, N. J., to operate on petroleum. This plant, now almost completed, will have a nominal charging capacity of 5000 barrels daily and is expected to begin operations this summer. Hydrogenation plants of like capacity are being erected at Baton Rouge, La., and Baytown, Tex. The main process of hydrogenation consists in adding hydrogen to heavy crude oils or the residues from lighter crudes after the gasoline and other necessary light products have been removed.

But two generally accepted methods

of obtaining light distillates from petroleum have been employed up to the present, it is said—distilling off the low boiling hydrocarbons and cracking the heavier ones. The hydrogenation process is designed as a third basic process to supplement the other two, and the potential field of its development, so far as it has yet been explored, may be summed up as follows: Conversion of coal and other carbonaceous solids into oil; conversion of heavy oil, natural or synthetic, into light products, and the conversion of crude oil, intermediate products or finished products into similar products of modified chemical characteristics.

By virtue of the development of internal combustion engines and the use of automobiles, the demand for gasoline far exceeds that for other petroleum

products. Consequently, for many years the industry has concentrated its efforts to increasing the yield of gasoline from crude oil. The hydrogenation process, with its potential ability to convert the whole of a barrel of crude oil into gasoline whenever necessary, provides a definite solution of this basic problem. Many problems still remain in connection with the most effective application of the process to the problems of industry, but it is thought the three plants at Bayway, Baton Rouge and Baytown will afford an opportunity to study hydrogenation on a full commercial scale and to determine the most efficient and economical method of fitting the new principle in the modern oil refinery.

\$1,000,000 Amusement Park

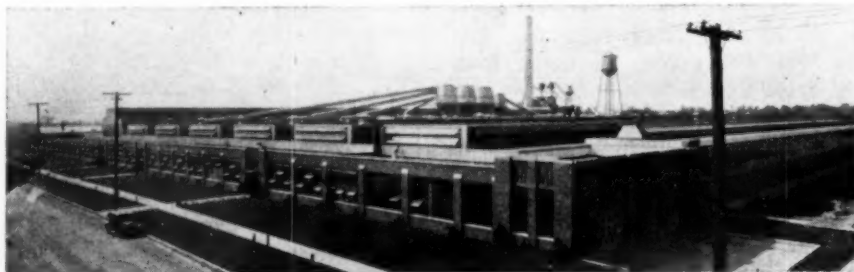
Corpus Christi, Tex.—Plans are being prepared by Dielmann & Levy, local architects, for a \$1,000,000 amusement park at North Beach, near this city, for Frank Thomas, Breakers Hotel, Corpus Christi. Facilities will include a bath house, dance hall 100 by 300 feet, and board walk 408 by 1200 feet.

Increased Output of Wood Products from Southern Plants

The Memphis plant of the Murray Wood Products Co., a subsidiary of the Murray Corporation of America, was erected in 1929 at a cost of \$2,500,000 for production of automobile bodies. Steel work for a duplicate unit has been erected. There are a number of similar plants in Memphis turning out automobile bodies and parts cut to exact size and shape for manufacture of automobile bodies, parts so produced being intended for shipment to automobile production centers in the North for assembly into bodies. In this way savings are effected in freight costs, for previously the rough hardwood lumber was shipped to Northern plants and there carried

through various manufacturing processes before it reached the assembly line.

The South is steadily consuming more of the lumber, both hard wood and softwood, it produces. Furniture factories have been successfully established in many states. Plants for the manufacture of architectural woodwork, built-in furniture, mouldings, interior trim, hardwood flooring, mill work and similar products have been built near the source of supply of raw materials. Recently attention has been given to the production of parts for radio cabinets, furniture, automobile bodies, etc., that are turned out to exact measurements and then shipped North and East for assembling and finishing in factories there.



\$2,500,000 Plant of Murray Wood Products Co., Memphis, Tenn.

Texas Turns to Industry*

By

JOHN W. CARPENTER,

President,

Texas Power & Light Co.

THERE are many elements in the economic situation which favor the development of manufacturing in Texas. Labor, for instance; construction costs, also. And then must be considered the present large population of Texas and surrounding states which is having to draw so heavily for its wants on the industrial East. The numerous Gulf ports and extensive railroad facilities constitute an open invitation to Texas to do its own converting of raw materials into finished goods. Texas has the equable climate, the long working year, the pleasant laboring conditions to induce contentment and to reduce friction among employees. The preponderance of raw materials is in itself a factor important in industrialization. And, to clinch the matter, one has only to admit that decentralization has established itself as a definite trend and that development of manufacturing in Texas not only is possible but is inevitable.

What, then, is the direction of this new development to take? How are mistakes to be avoided? How is the greatest good to be derived from the situation?

I would say at the outset that one of the most tragic mistakes that can be made, and that is steadily being made, is the failure of Texans to realize their opportunities and the concomitant reluctance of certain industries to read the writing on the wall. Partly due to lack of vigorous espousal of Texas' claims and partly because of the trepidation of industrial concerns to make the long trek Texas-ward, we find business after business driven from its traditional location to a new site a few hundred miles away, there to languish until the decision is eventually made to go the full distance to Texas where conditions are positive rather than negative or neutral. The decision should have been made in the first place. The loitering along the way is costly. If Texas is so clearly indicated—as it so often is—then Texas it should be, and without delay.

Guesswork no longer is necessary when Texas is being considered. Exhaustive surveys of opportunities have been made by unprejudiced industrial engineers. Texas, unlike certain other states with romantic backgrounds, has taken itself out of the ballyhoo class. It is ready to talk in unsentimental figures, and willing for these figures to be gathered and interpreted by statis-

tical robots without the sense of feeling. Not only does the state have surveys ready to submit at a moment's notice, but it has numerous business organizations—the Texas Power & Light Company among them—who are glad to make investigations in response to inquiries made in good faith.

Texas has pretty well felt out its capabilities. While engaged in this preliminary experimentation, it has achieved an annual revenue from manufacturing of well up toward one and a half billion dollars—an income sufficient to place it head and shoulders above every other Southern state industrially. Yet Texas has barely crossed the threshold. Its industrial future is ahead. And this future will be superimposed upon a wealth of agriculture and a diversification of natural resources that will carry it far.

Texas today is cock o' the walk in petroleum production, and it is but a matter of time until it will pass California in petroleum refining. Texas for years has been the banner state in farm crops, in fact it is almost as good as any two other commonwealths in the size of its agricultural sinews. Texas tops the world in cotton. In a decade it will be the globe's largest wheat granary. With oil, cotton and wheat, Texas will control America's export trade—be the economic dictator of the universe. How can anyone deny that industry will gravitate toward this queen star—the Lone Star—of the Southwest?

I look for textiles to experience a period of great expansion in Texas. How natural it should be for the industry which seeks Texas staple from afar, to relocate at the source of supply when conditions become oppressive at its present abode. Texas produces a fiber of peculiarly hard body, tough and strong, ideally adapted to the manufacture of certain kinds of goods. Whether it is the result of climatic or of soil conditions, the fact remains that this special type of cotton is confined almost wholly to the black lands of central Texas. Millers all over the world know this, and send their buyers to the belt with instructions to pay the proper premium prices for that which meets their exacting requirements.

Every year Texas ships huge quantities of baled cotton, only to buy back

great amounts of it as finished goods. Logic points to home production for home needs. Furthermore, the part of wisdom is to operate an establishment where its routine will not be disrupted by professional agitators, where a single language is spoken, where adequate supplies of intelligent labor are available. Cotton milling, which has been so harassed by labor troubles, ought to welcome the idea of Texas locations.

Texas is not untried in cotton milling. It has a widely dispersed textile industry which has stood the test of a score or more of eventful years. It has proved its desirability as a scene of textile enterprise. Nearly 30 milling units and a number of garment factories and other related enterprises are making commercial successes every day.

Electric power is a factor in the sweep of industrialization in Texas. It is available in adequate quantities at reasonable rates over a wide breadth of territory, and it constitutes a principal inducement for factories to migrate to Texas.

It is no uncommon thing to see important manufacturing enterprises located in small Texas communities. Brick factories, gypsum plants, lumber mills, stone quarries are distributed here and there across a broad expanse. Texas granite has been discovered as one of the finest building stones in existence. Canneries have come in numbers. And cheese factories and milk plants have made such phenomenal headway as to be the sensation of recent months.

It is apparent, even at this early stage, that Texas' industrialization is to go forward upon the soundest, most diversified, most intelligent basis. It is receiving the wholehearted support of the citizenship, who are giving their opportunities careful consideration and who are eager to invest their funds in home enterprises.

It is my opinion that Texas has a more enticing outlook in manufacturing at this time than any other state or section has had in its whole history. Texas is blessed with the spirit of adventure, the same spirit that led the forefathers to perform miracles upon the frontier. Texas has wealth, a wealth that can neither be measured nor dreamed. Texas has leadership, a leadership that will carry it far not only in industry and in agriculture but in education and culture. With all these things, the most we can do is to prepare to be astonished at the wonders that will be accomplished within the life span of the present generation.

*This article by Mr. Carpenter is reprinted from the April number of Texas Opportunities.

Using Motor Trucks to Haul Arkansas Timber

Arkansas is among the leading lumber-producing states in the Union. It holds seventh place among timber-producing states, and according to estimates of the American Tree Association its timber stand is 25,000,000,000 board feet in hardwoods and 15,000,000,000 board feet in soft woods.

One of the largest timber operators and manufacturers in Arkansas, the Dierks Lumber & Coal Company, has been making extensive use of motor trucks and trailers; these take the place of mules in the direct transport of logs from where cut to railroad sidings or mills. The Dierks Company owns a vast acreage of virgin timber in Southwest-ern Arkansas and Oklahoma.

In the accompanying illustrations two

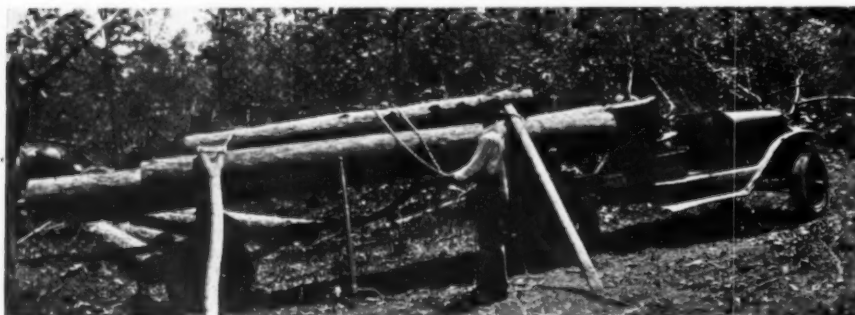
six-speed special International trucks are shown at work southwest of Hot Springs. One truck is being loaded at the bottom of a ravine, the other is on the highway traveling to a railroad siding nine miles away. To go direct from location where the timber is cut, up hills and over rough narrow trails, is hard work, but the modern motor truck does it day after day with a great saving in time, cost, and labor over previous methods of transport. Particularly for long hauls motor trucks are time and money savers, and their value increases correspondingly as timber operations are conducted in less accessible places, farther away from railroads.

The Dierks Lumber & Coal Company is now operating a fleet of 32 Interna-



Truck and Trailer

Hauling pine logs from cutting operation to railroad siding nine miles away.



Loading Truck and Trailer at Bottom of Ravine.

tional Harvester six-speed special motor trucks and two-wheel trailers. It has two important pine mills in Arkansas, at Mountain Pine and at Dierks, with a monthly output of 7,000,000 feet. Both are electrically operated. The Mountain Pine mill was placed in operation the latter part of 1928 and is considered one of the most modern in the South. In addition, the company operates three large pine mills and a hardwood mill in Oklahoma. Also, it operates three railroads. Products of the company are sold throughout the Middle West and the East and general offices are maintained in Kansas City, Mo.

BIDS ON \$10,000,000 SEWER UNIT

Louisville Carrying Out Big Improvement Program

Louisville, Ky.—Bids will be opened June 24 by the Commissioners of Sewerage for building section A of the Southwestern outfall sewer, part of the big sewer extension program for which a bond issue of \$10,000,000 was voted in 1928. Other work in connection with the program was previously awarded, while plans for the Middle Fork extension are expected to be completed in time to award contracts in July. Construction involved in section A of the Southwestern outfall will embrace 10,350 feet of trench excavation from 28 to 66 feet deep, 86,000 cubic yards of reinforced concrete, 10,000,000 reinforcing steel bars, 11,000 square yards of vitrified sewer lining and 1200 feet of con-

crete piles. Woolsey M. Caye is the technical engineer of the sewerage commission.

"The Geographic Center"

B. G. Gildersleeve, secretary-manager of the Elizabethton Chamber of Commerce, Elizabethton, Tenn., calls attention to a statement in the MANUFACTURERS RECORD of May 8, which referred to Elizabethton as "the geographic center of the United States." The sentence should have read "the geographic center of the Eastern United States." In sending the correction, Mr. Gildersleeve writes:

"I do not believe any business or professional man or woman, or group, should be denied the value, interest and instruction contained in every issue of the MANUFACTURERS RECORD. It is unquestionably the best publication of its kind, and I read it as eagerly and with as great benefit as when I first received it many years ago."

Work Progressing on Telephone Building

San Antonio, Tex.—Construction is progressing on the new administration and equipment building here for the Southwestern Bell Telephone Co., St. Louis, the steel frame having reached the fourth floor. The building will be 8 stories, basement and sub-basement, with two pent house floors, 118 by 211 feet, of steel, brick, tile and terra cotta. Foundations will be supported by concrete caissons. The roof will be of asphalt. Foundations and frame are designed for an ultimate height of 21 stories and pent house. The structure will cost about \$800,000, exclusive of foundations, frame, elevators and mechanical equipment. I. R. Timlin is the architect and W. J. Knight & Co., engineers, both of St. Louis. General contract was awarded to the McKenzie Construction Co., San Antonio.

Taxation, Rates and Methods of Assessment in Louisiana

State and Local Taxes Average About 30 Mills

In this discussion of taxation rates in Louisiana the MANUFACTURERS RECORD continues its series of articles on methods of taxation and their operation in the Southern states. A summary of the tax laws of Arkansas appeared in our issue of May 1.

By GEORGE M. WALLACE, Secretary, Louisiana Tax Commission, Baton Rouge.

There is but one assessment for state and parish (county) purposes and that is made by the parish tax assessor, except as hereinafter noted. Municipal taxes as a rule are assessed from the assessment roll made by the parish tax assessor for state and parish purposes. Assessments for state purposes are on the basis of 100 per cent of the actual cash value, but local subdivisions may use a smaller percentage of the actual cash value for the purpose of assessing taxes.

All property in the state, except such as is expressly exempt, is subject to taxation for state, parish and municipal purposes.

Taxes for state purposes in the aggregate amount to 5¼ mills on the one dollar of the value of all property assessed at actual cash value. In addition, foreign-owned rolling stock used in the state is taxed at 25 mills on each one dollar of valuation.

Parishes may levy not to exceed 4 mills on the dollar for general purposes, exclusive of schools, except in the parish of Orleans.

In aid of schools, parishes may levy not to exceed 3 mills on the dollar at the request of the parish school board to the police jury.

Any parish, with exception of the Parish of Orleans, may, upon like authorization, levy a special tax for construction of canals or improvement of watercourses for navigation purposes, and may cooperate with the Federal Government for such purposes.

Any parish, municipality, or school road, sewerage, or drainage district may, upon authorization by popular vote, levy a special tax for construction and maintenance of roads, bridges, public building, drains, levees, and other public improvements authorized by the legislature, in the case of parishes and municipalities; public buildings in school districts; roads and bridges in road districts; or sewerage and drainage works in sewerage and drainage districts.

The mayor and board of aldermen of every city (except New Orleans), town, and village are empowered to levy for

general revenue purposes not to exceed 7 mills; special taxes for giving additional support to public schools, erecting and constructing public buildings, bridges, sewerage works, and other improvements in aid of public improvements or railway enterprises not to exceed 5 mills in any one year and continuing for not more than 10 years; and not to exceed 10 mills for payment of interest on public bonds for a period not to exceed 40 years.

Property of non-residents is upon the same basis for purpose of taxation as that of residents. Notes, judgments, accounts and credits of such non-residents originating from business done in this state is property with its situs within the state, and subject to taxation at the business domicile of the non-resident in Louisiana.

Plants engaged exclusively in utilizing waste materials, such as pine stumps, roots, limbs, and other waste resinous dead pine wood in the manufacture of rosin, turpentine, pine oils, pitch, and other naval stores, allied products, wood pulp and paper, are made a separate class for the purpose of assessment and taxation, and for ten years from January 1, 1924, are to be valued by the assessing authorities for state purposes at 10 per cent of actual value and so listed; and such valuations and listings shall be binding for local purposes upon all subdivisions in which such plants are located.

Bonds of any state of the United States and political subdivisions of any such state, bonds of railways, railroads and other public utilities, manufacturing and industrial corporations and bonds secured by real estate, except such as are exempt from taxation by law, are made a separate class for the purpose of taxation and are to be assessed at 10 per cent of the market value thereof.

Ship repair plants owning and operating floating dry docks for repairing and constructing ocean-going vessels are given a special classification for a period of ten years after January 1, 1926, and are to be valued for state purposes at 40 per cent of actual value and so listed; and such valuation and listing is

binding on local subdivisions for local purposes.

A state tax is levied on all inheritances, legacies, and other donations causa mortis to the direct descendants, ascendants, or surviving spouse of the decedent at the rate of 2 per cent on all amounts between \$5000 and \$20,000 in value, and 3 per cent if over \$20,000 in value; on all dispositions to collateral relatives 5 per cent on the actual cash value between \$1000 and \$20,000 and 7 per cent if over \$20,000; on all dispositions to strangers, 5 per cent if between \$500 and \$5000 in value and 10 per cent if over \$5000. There are certain exemptions from inheritance tax.

License taxes for the severance of natural resources from the soil or water, including all forms of timber, turpentine, and other forest products; minerals, such as sulphur, salt, coal, and ore, oil, also marble, stone, gravel, sand, shells, and other natural deposits, are imposed.

These taxes vary from seven cents per thousand feet to twenty-six cents per thousand feet log scale, for timber. For turpentine, ten cents per barrel of 400 pounds. On oil, the taxes graded according to gravity, from four cents per barrel of 42 gallons to eleven cents per barrel of 42 gallons. On gas, the tax is one-fifth of one cent per thousand cubic feet, measured at 10 ounce pressure. On other products the tax varies from one to fifteen cents per ton of two thousand pounds. The license tax for the privilege of manufacturing carbon black from natural gas is five-tenths of one cent per pound.

There is no income tax levied in the state, although it is authorized by the constitution.

The fixed taxes rates are as follows: State purposes, 5¼ mills; parish (county) purposes, 4 mills; school purposes, 3 mills. Total 12¼ mills. In addition, sufficient special taxes are voted to bring our average for the whole of state and local taxes to about 30 mills.

Wallace's "Louisiana Tax Laws" and a reprint thereof entitled "Laws Regulating the Levy, Assessment and Collection of Taxes" issued by the Louisiana Tax Commission contain a complete discussion of the tax question of the state.

Miniatures of Southern Cities

Orlando, Florida



By C. M. GAY, Orlando Chamber of Commerce.

CENTRALLY located in the Peninsula and the hub of the good roads system of the state, Orlando ranks as Florida's largest inland city, with a population of 35,000. The city exemplifies Florida as one might hope to find it—with the warmth of the semi-tropics; songs of a thousand birds; brilliant color and unforgettable fragrance of rare flowers; sunny skies over blue lakes; avenues shaded by stately oaks. Orlando is a playground nearly every day in the year.

Amid such surroundings are located 79 industrial plants manufacturing about 50 different articles and employing 2,600 workers who receive an annual payroll of approximately \$2,500,000.

Orlando is the citrus capital of Florida. The United States Bureau of Economics and the Department of Agriculture maintain a branch experiment station, and the county agricultural agent has an office in the city.

Building permits for 1929 totaled \$597,955.

Athens, Georgia



By C. D. TERRELL, Athens Chamber of Commerce.

MORE than 50 manufacturing plants are located in Athens, which has a 1930 census population of 18,081. Products of these plants, some of which are of national reputation, include tire fabric, cotton flannel, men's hose, cotton and jute webbings and braided cords, yarns and thread, millwork, wooden shovel handles and baseball bats, fertilizer, monuments, cotton seed products, shirts, dresses, mattresses, wagons, awnings, auto tops and bodies, heating furnaces, novelty furniture, bleached goods, flour and meal. Industrial payrolls amount annually to over \$2,000,000. One

of the outstanding plants is the factory of the Hanna Manufacturing Co., which makes shovel handles and baseball bats. Half the output of shovels from this plant is shipped to England. Baseball bats are produced for practically all the home run artists of the big leagues, this department having a daily capacity of 3000 bats. An Athens roofing contractor, the L. M. Leathers Co., secured the two largest roofing contracts let in the Southeast during the past several years, these calling for covering the Goodyear Tire plant at Gadsden, Ala., and the new Wesleyan College buildings at Macon, Georgia.

Athens is the home of the University of Georgia, State College of Agriculture, State Teachers College, Lumpkin Law School, Lucy Cobb Institute, Knox Institute, (colored), and the Union Baptist Institute, (colored). The new concrete stadium at the University of Georgia was completed early in 1929 and a \$100,000 building is assured for the Lumpkin Law School. Students of these various institutions spend \$2,100,000 each year in Athens.

Building permits for 1929 were \$365,140, the yearly average for the past ten years being \$500,000. Athens is classed as a strictly Open Shop community.

Lexington, Kentucky



By E. D. WILDER, Lexington Board of Commerce.

LEXINGTON, with its population of 62,301, is a prominent Southern educational center and has 104 manufacturing plants catering to the local population.

For the past several years the city has been the largest loose leaf tobacco market in the world, with 60,000,000 pounds of tobacco selling for \$20,000,000 in 1929 and approximately 65,000,000 pounds selling for \$17,000,000 in 1930.

The city is recognized as the largest thoroughbred horse-breeding center in America and also as a leading spring lamb market.

When in 1929 the city was selected as the site for a United States Veterans' Hospital to cost \$1,000,000, a government official stated that Lexington, which had successfully competed against 87 other localities, more nearly approximated the 100 per cent ideal hospital site than any other that had been brought to his attention.

Lexington is classed as a strictly American Plan Open Shop community.

Building permits for 1929 amounted to \$2,115,197.

Augusta, Georgia



By MRS. G. C. BENTLEY, Chamber of Commerce.

AUGUSTA has a population of 60,000, distributed over an area of 6195 acres.

Located in the city is the Riverside Mill, largest waste and respinning mill in the United States.

The Babcock & Wilcox Company's refractory plant, put in operation in February, 1929, is making extensive enlargements and expects to continue adding units as required.

For 1929 the building permits totaled \$1,301,350.

Within Augusta's trading radius on the South Carolina side there has been a combination of cotton mills under one large corporation. Approximately \$2,000,000 has been expended in building a bleachery and in erecting operatives' houses.

Johnson City, Tennessee



By HARRY FAW, Chamber of Commerce.

POPULATION of Johnson City as given in preliminary census figures for 1930 is 25,073. The area of the city was increased by about one square mile last year.

Johnson City is the second largest hardwood flooring manufacturing center in the United States. The diversified list of industries includes also wood manufactures and lumber products, furniture, brick, textiles, flour, iron products, tannery products, peanut butter, popcorn, furniture decorations, butter and ice.

Johnson City is the center of a rich agricultural country, dairying, stock raising, tobacco and vegetables being principal products. This section is also rich in minerals, which have been developed only in a small way.

Building permits for 1929 were about \$900,000, and considering the average permit as half the cost, the actual cost of construction for the year amounts to \$1,800,000.

Creation of a City Planning Commission was the outstanding undertaking of the city during 1929. This commission is

now at work in carrying out a well considered city plan.

This city would be classed as an American Plan Open Shop community. Some trades are organized, but they are unable to control the situation. Industrial labor is not organized.

Jonesboro, Arkansas



By C. J. CHAPIN, Jonesboro Chamber of Commerce.

JONESBORO, with 17,000 population in its immediate trade area, has the largest hickory handle factory in the South. Operated by the American Handle Co., this plant is also the largest industry in the city, shipping handles to all parts of the world. Next in size is the plant of the Pierce-Williams Co., manufacturers of fruit and vegetable packing and shipping crates, and baskets.

Milk production has shown a marked increase in this territory, practically all of it being consumed by three local creameries.

The largest development in 1929 was installation of a natural gas plant to serve the city. The plant is owned by the Arkansas Power & Light Co. and secures gas from the pipe line connecting St. Louis, Mo., with the Monroe, La., gas field. Another outstanding improvement was the increase in mileage of street paving.

Jonesboro is strictly an American Plan Open Shop community.

Denison, Texas



By R. G. GRESHAM, Chamber of Commerce.

DENISON, a city of 22,000 population, is the railroad center of North Texas, five of the trunk lines coming into the state meeting here. Federal statistics show Denison to be one of the three most healthful communities in the United States. Elevation of the city is 767 feet.

Denison is a leading community of the Southwest for dairying and poultrying, the major local activities. During 1929 success crowned efforts to bring the Southwestern headquarters of the Kraft-Phenix Cheese Corporation to this city. The company will operate a plant to make packaged, jarred, and bulk cheese, also a mayonnaise plant and an egg breaking plant.

Located here, in addition to a number of other industries, is a large hatchery, with a maximum capacity of 260,000 certified eggs per hatch.

Asheville, North Carolina



By Asheville Photo Service

By FRED L. WEEDE, Asheville Chamber of Commerce.

ASHEVILLE'S population is estimated at 55,000 with an additional 10,000 people residing in the metropolitan area. Upon completion of all the units of the American Enka Corporation's plant, the city will have one of the largest rayon yarn manufacturing concerns in the United States. The city also ranks high in the total of lumber and wood products, with several large operations in these industries.

Most significant among accomplishments of Asheville during 1929 was establishment of the Asheville-Hendersonville Airport in conjunction with Hendersonville and Henderson County officials and organizations. This is a two-runway landing field with complete drainage, hangar space, circle markers and other first class airport facilities.

The outstanding development of Western North Carolina is the tremendous power plant being constructed on the Nantahala and Tennessee rivers by the Aluminum Company of America. It is understood from \$100,000,000 to \$125,000,000 is to be expended for this purpose. There is marked activity in copper mining and reduction in this section, and a new plant is projected to utilize the extensive copper area existing on the edge of the Great Smoky Mountains National Park. For this park the Park Commission of North Carolina and Tennessee are soon to transfer 152,000 acres of the total to the Federal Government.

Sherman, Texas



By LEE SIMMONS, Sherman Chamber of Commerce.

ESTIMATED population of Sherman is 21,000. Several of the city's 57 industries are outstanding; the chief is the plant of Pool Manufacturing Co., employing 650 workers and rated as the largest plant for manufacture of dress shirts and work clothing in the South. Another of importance is the plant of the Interstate Cotton Oil Refining

Co., which produces and ships 1200 cars of shortening annually. Three city blocks are covered by the cotton gin and mill supply plant of the Hardwicke-Etter Co. Outstanding among the plants of the Southwest is the Washington Iron Works, which repairs and reworks the largest and also the most intricate machinery, a specialty being Diesel engine work.

Other enterprises include four flour mills, a grain elevator with an 800,000-bushel storage capacity, a plant making different kinds of candy, a milk products plant and a cotton mill which consumes 6500 bales of cotton annually.

The city is situated in a rich, well improved, diversified farming section and has been called by some the "City of Factories and Colleges," because of colleges and numerous industries in the vicinity.

Building permits for 1929 were \$318,406, and a \$150,000 project was constructed outside the city limits by the Woodmen Circle Home.

Sherman is not an American Plan Open Shop community, although union labor is employed only in the plant of the Pool Manufacturing Co.

West Palm Beach, Florida



Photo by Ray B. Dame, West Palm Beach

By JANE FLOYD BUCK.

ON the shores of Lake Worth and with that vast and rich agricultural territory, the Everglades, lying at its back door, West Palm Beach is strategically located both from a recreational and agricultural standpoint. The city has an approximate permanent population of 31,000, thousands of guests being entertained during the winter months.

West Palm Beach has a wide range of industries, one of the most interesting and important being the Mizner Industries, Inc., which makes fine pottery and tile, hand wrought iron, and copies of Spanish antique furniture. As the city is located within a short distance of the Atlantic Ocean, it has excellent port facilities and these are being steadily improved. During 1929, 31,000 tons of merchandise passed the Port of Palm Beach.

Since the most important activity is the resort industry, the broadening of entertainment facilities occupied municipal attention and resulted in the inauguration of a recreational department and employment of the Caesar LaMonica Band. Another important activity from a resort standpoint was revival of the Seminole Indian Sun Dance, which culminated in an elaborate Mardi Gras festival in March.

Value of building permits for West Palm Beach reached \$1,359,785, while those for the township of Palm Beach climbed to \$2,554,349.

Macon, Georgia



By WILTON E. COBB, Macon Chamber of Commerce.

GREATER Macon was established late in 1929 by adoption of a borough system, this giving the city a population of more than 61,000.

Macon is the trade center for a large agricultural territory, while within the city are more than 150 manufacturing plants. Textile manufacturing leads and the city is the headquarters of one of the most successful textile organizations in the country, that of the Bibb Manufacturing Co. Also located in the city is Happ Brothers Co., one of the largest overall and garment manufacturing concerns in Dixie.

Macon is the center of the Georgia kaolin deposits and following exploitation of these clays came the establishment of the Carling Tile Company's plant, the first floor and wall tile plant in the South.

Building permits for 1929 totaled \$1,021,071, this amount being hardly 20 per cent of the true value.

Macon is an American Plan Open Shop community.

Hopewell, Virginia



By F. M. BOYKIN, Chamber of Commerce.

HOPEWELL was incorporated in 1916, at which time the DuPont Company had completed a \$75,000,000 plant for manufacture of gun cotton. With the signing of the armistice this immense plant, which employed over 30,000 men at the peak of operations in 1917-18, was dismantled and the city's population was reduced to 1398 people. Now, a little over 11 years later, Hopewell's population has risen to more than 18,000.

Among large manufacturing concerns located at Hopewell

are: The Atmospheric Nitrogen Corp., manufacturer of nitrates and ammonia, who will eventually invest \$125,000,000 under a program including one unit now completed at a cost of \$35,000,000 and another unit under construction to cost \$20,000,000; the Tubize Artificial Silk Co. of America, employing 3600 operatives in a plant manufacturing rayon yarns; the Hummel-Ross Fibre Corp., makers of kraft paper from wood pulp; the Hercules Powder Company's Hopewell branch, which purifies cotton linters for use in cellulose commodities, and the Hopewell China Corp., producers of high grade table ware.

It is estimated that coal and coke requirements of Hopewell will exceed 1,000,000 tons in 1930.

In the past Hopewell was termed the "Wonder City." Today it is called "Virginia's Industrial City" and the "Inland Port of Virginia." In the future it bids fair to become known as the "Chemical Center of the South."

Miami, Florida



By WALTER W. BRUNS, Industrial Board.

A CONSERVATIVE estimate places the present population of Miami at 150,000, which includes the cities of Miami, Miami Beach and Coral Gables. Of Miami's permanent population it is estimated that 85.43 per cent are white, 11.97 per cent colored, and 2.6 per cent foreign.

Miami has been called the "Aerial Gateway of the Americas." The strategic geographical location of the city is one of the principal reasons for its rapid and permanent development as an international airport between the United States and Central and South America.

What was perhaps the outstanding accomplishment in 1929 by the Industrial Board, which is a part of the Municipal Government, was organization of the Greater Miami Industrial Association. This association is composed of over 100 of the city's leading business and professional men, who meet at luncheon each week to discuss constructive industrial development.

Marked progress has been made in starting small industrial plants for manufacture of bricks, golf balls, toys, aircraft, cigars, and other products. The Industrial Board has also cooperated with the Aviation Board, resulting in development of the city into the largest and most important commercial international airport of the country.

Building permits for 1929 included \$3,911,750 for Miami, \$7,856,950 for Miami Beach, and \$973,425 for Coral Gables. All these figures were increases over the 1928 permits, while the amount for Miami Beach was more than double the 1928 figure. Bank clearings totaled \$143,316,000, deposits aggregating \$48,500,000.

Miami is generally classed as a strictly American Plan Open Shop community.

\$1,000,000 DEAL FOR BIRMINGHAM PLANT

Whiting Corporation Plans Big Development

Birmingham, Ala.—The Whiting Corporation, Harvey, Ill., has acquired control of the Goslin-Birmingham Manufacturing Corporation, a consolidation of the Birmingham Machine & Foundry Company and the Joubert-Goslin Manufacturing Company, and plans to largely develop the plants. The deal involves about \$1,000,000 and was promoted by the Birmingham Industrial Board, of which H. C. Ryding is president and W. Burney Perry, secretary. The local company operates large foundry and machine shops, producing heavy chemical, sugar and other special machinery. It also has soil pipe and cotton press manufacturing departments and engages in general machinery and foundry work.

With a background of 40 years of manufacturing and engineering, the Whiting Corporation plans to produce seven distinct lines of industrial machinery, in addition to the present Goslin-Birmingham lines. These will include cranes of all types, including electric traveling cranes up to 300 tons capacity; foundry equipment, including cupolas, charging machines, ladles, tumbling mills, dust filters, core ovens, etc. The company is a pioneer in the manufacture of foundry equipment, special equipment for railroad shops, evaporators, crystalizers, recovery systems for pulp mills, special chemical equipment, pulverized coal systems for firing boilers, metallurgical furnaces, ovens, etc., and automatic stokers for small boilers.

South Supplies Over Third of Refined Primary Lead in the United States

Output of refined primary lead in the United States, from domestic ore, amounted in 1929 to 672,498 short tons, valued at \$84,735,000, as shown by reports made by producers to the United States Bureau of Mines. Production was 7 per cent larger than in 1928 and the value was nearly 17 per cent larger. The greater percentage of increase in value was due to increase in the average selling price from 5.8 cents a pound in 1928 to 6.3 cents in 1929. Production of refined lead from foreign ore, principally from Mexico, amounted to 102,135 short tons, a decrease of 34 per cent from 1928. Consequently, there was a decrease in the total output of primary lead from domestic and foreign sources of nearly 1 per cent.

Nearly 31 per cent of the lead pro-

duced from domestic ore was derived from Missouri; nearly 23 per cent from Utah and nearly 22 per cent from Idaho. The remainder was from a number of states, most important in 1929 being Oklahoma, Kansas, Montana and Colorado.

Apparent consumption of refined primary lead in the United States in 1929 amounted to about 693,000 short tons as compared with about 658,000 tons in 1928.

\$500,000 Missouri Church Completed

Designed not only for a regular congregation but to afford church facilities for students attending the University of Missouri and other nearby schools, the new building at Columbia, Mo., of the Methodist Episcopal Church, South, is one of the finest structures of its kind in that section. Plans and specifications were prepared by the Architectural Department of the Board of Church Extension, Louisville, Ky., H. M. King, architect-secretary, and general contract was awarded to the John Eppler Construction Company, Columbia. Cost of the structure is estimated at more than \$500,000.

Of Gothic architecture, the building is faced with Indiana limestone rough in texture and varying in color, with a tower that will remain incomplete temporarily, but designed to be carried higher to house a set of chimes. The building is 142 by 195 feet. On the first floor are offices, library, rooms for the Methodist Student Organization and student pastor, and quarters for nursery and beginner pupils. On the second floor are primary and women's departments, on the third floor assembly and class rooms for Junior, Intermediate and Senior departments. A feature of the building is a recreation room, social and fellowship hall equipped with a stage and dressing rooms and a kitchen



New Church at Columbia, Mo.

completely equipped. A chapel seats about 300.

Major sub-contracts were executed as follows:

Steel work—Zentner Engineering Company, East St. Louis, Ill.
Stone work—Swenson Stone Company, Bloomington, Ind.
Paint and varnish—Benjamin Moore & Company, St. Louis.
Kitchen equipment—William Ford Company, St. Louis.
Art glass—Jacoby Art Glass Company, St. Louis.
Lighting fixtures—Edwin F. Guth Company, St. Louis.
Electrical work—Athens Electric Company, Columbia, Mo.
Pews and chancel work—American Seating Company, Chicago.
Interior decorations—William H. Peters, Jr., Chicago.
Linoleum floor covering—Builders Material Supply Company, Kansas City, Mo.
Pipe organ—Skinner Organ Company, Boston, Mass.
Acoustic treatment—Celotex Company, Chicago, R. V. Aycock Company, St. Louis.
Millwork and trim—American Sash & Door Company, Kansas City.
Heating plant—American Radiator Company, New York.
Plumbing—Groschel Company, Marshall, Mo.
Miscellaneous furnishings—Scruggs-Vandervoort-Barney Dry Goods Company, St. Louis.
Structural steel—Illinois Steel Bridge Company, Jacksonville, Ill.
Roofing and sheet metal work—Pete Stauffer, Moberly, Mo.
Lathing and plastering—Walters Plastering Company, Kansas City, Mo.
Painting and decorating—J. D. Jenkins, Columbia, Mo.
Mantels—Kasota Stone Company, Mantokota, Minn.
Tile—Nemadji Tile & Pottery Company, Moose Lake, Minn.
Hollow tile—Fayette Brick & Tile Company, Fayette, Mo.
Common brick—Edwards Brick Company, Columbia, Mo.
Hardware—Richards & Conover Hardware Company, Kansas City.
Lumber and flooring—Cotton Lumber Company, Columbia, Mo.

Cotton Ginned From The Crop of 1929

The Department of Commerce will shortly distribute the annual bulletin on Cotton Production in the United States from the crop of 1929. Statistics were compiled by the Bureau of the Census from individual returns collected from 14,868 active ginneries located in 945 counties in 19 states. Final figures of cotton ginned are 14,548,861 running bales, counting round as half bales, equivalent to 14,825,949 bales of 500 pounds each.

COTTON GINNED FROM THE CROPS OF 1929 AND 1928.

(Linters are not included.)

State	500 Pound Bales—	
	1929	1928
United States	14,825,949	14,477,874
Alabama	1,341,550	1,109,126
Arizona	152,839	148,458
Arkansas	1,434,660	1,245,982
California	259,647	172,230
Florida	28,578	19,203
Georgia	1,342,643	1,029,499
Louisiana	808,825	690,958
Mississippi	1,915,430	1,474,875
Missouri	219,932	146,909
New Mexico	88,450	83,544
North Carolina	747,208	836,474
Oklahoma	1,142,666	1,204,625
South Carolina	830,055	726,039
Tennessee	515,774	429,284
Texas	3,941,626	5,109,939
Virginia	47,527	43,711
All other states*	8,539	6,018

*Includes Illinois, Kansas and Kentucky.

Liquid Reserves for Agriculture

By BENJAMIN M. ANDERSON, JR., PH. D., Economist of The Chase National Bank of the City of New York.*

It is difficult to find a time when counsels of thrift and financial conservatism are welcome counsels. In boom times men resent them, and in times of depression, when money is hard to get hold of, men are ready enough to give assent to them, but are not in a position to do much about it. It is well to choose such a time, however, to plant seed which may grow later.

A period of prosperity involves a greater danger of over-expansion and over-capitalization in agriculture than in most other lines of production. Twenty-five cent sugar was financially disastrous to Cuba. The high prices of grain and live stock, through 1915-19, left our farmers in a most vulnerable financial position.

Agriculture has much to learn from industry and commerce in the matter of financial technique. Liquid investments and the importance of liquidity are little understood in agricultural regions. Rather, as intelligent men, our farmers invest in the things they know and understand—namely, land and mortgages on land. The farmer with surplus funds thinks first of land. If he is an old man or a very conservative man, he lends to some other farmer on mortgage security to enable him to buy land. Both of these investments are socially approved in the community as proper things for a conservative, substantial man to do. The foundation of a speculative boom in farm lands is thus to be found in practices and ideals which constitute the conservative wisdom of an agricultural community.

In individual cases, it often is wise to buy land or to lend on farm mortgages. But when an agricultural community as a whole receives a large volume of new funds through a sharp rise in prices of farm products, a sharp rise in land prices is almost inevitable. Mortgages are not paid off. Rather, active and successful farmers use their profits as margins and buy more land, partly on borrowed money. The more prudent elements of the community distrust the higher values at first, but as actual sales at higher prices take place in sufficient number, new standards are created and the community comes to believe in the permanence of the new values. New loan standards are also created. Perspective is lost. It is easy to go into debt for the purchase of land and finally

a boom psychology is created in which the whole structure, both of land values and of loans on land, may become very unreasonably high. When reaction comes, such communities are very ill prepared to meet it.

Copper and steel, as well as agriculture, faced the problem of rapidly rising prices in the boom period, 1915-20, followed by a sudden collapse in the crisis and depression. Both industries had the same temptation to run wild financially that agriculture had, and both would have been wrecked in 1920-22 if they had allowed themselves to run wild in 1915-20. It is interesting to see how two well-managed corporations, one in steel and one in copper, handled their finances during the boom, crisis, and depression.

The United States Steel Corporation, including its subsidiaries, between the end of 1913 and the end of 1922, reduced its bonded debt from \$627,000,000 to \$540,000,000. In 1913 its undivided surplus stood at \$152,000,000. By the end of 1920, this had risen to \$523,000,000. Much of this addition to surplus was invested in marketable securities. Security holdings rose from \$2,241,000 in 1913 to \$159,000,000 at the end of 1919. Another \$100,000,000 of the increased surplus was kept in cash, the cash rising from \$66,951,000 in 1913 to \$166,727,000 at the end of 1919. In the period of trouble, United States Steel drew heavily on these liquid reserves, selling about \$99,000,000 of its securities by the end of 1922 and pulling its cash down to \$117,000,000 by the end of 1921. At the worst of the trouble, United States Steel was in a far stronger position than in 1913.

The Utah Copper Company showed no bonded debt in 1913 and showed none in its statement for 1923. It saved over thirty-nine million dollars of the boom-time profits and it put a substantial part of this increase of surplus into marketable securities. Security holdings stood at \$2,472,000 in 1916 and at \$13,847,000 in 1919. This liquid reserve was needed in the years that followed. The securities had been pulled down to \$4,959,000 by the end of 1923. The surplus from operations dropped from \$49,000,000 in 1919 to \$36,497,000 in 1922, but rose again to \$40,472,000 in 1923—at which time it stood over thirty millions above the surplus of 1913.

The contrast between these financial policies and those which prevail in agriculture is deserving of attention and study. The farmer can also learn to take account of the fact that there are

alternations in business, that sharp booms are usually followed by sharp reactions, and that when reactions come liquid cash and marketable securities are very useful.

In what shall the farmer invest the surplus funds that come in good years? For many farmers the question sounds ironical today, but good years will come again, and many individual farmers will have surplus funds this year.

The country banker, supplementing his information by consulting his city correspondent, will be the farmer's best adviser in matters of this kind. The farmer has often been the victim of enthusiastic salesmen of speculative stocks, and the banking fraternity should be alert to guard him against this in the future. Short-term Liberty bonds and local school district warrants, in well-managed districts, are excellent. Both are acceptable as collateral at the country bank in time of financial pressure, since both are very acceptable as collateral when the country banker wishes to borrow from his city correspondent. Every country banker can have a list of good railroad and industrial bonds (of fairly short maturity so as to avoid the risk of wide market fluctuations with changing interest rates), which he can recommend to his customers as suitable for a liquid reserve. Local mortgages, however good, do not meet the requirement of liquidity, and while excellent as a source of income for retired farmers, do not constitute a suitable emergency reserve for the active farmer. Savings and time deposits with the country bank constitute a satisfactory reserve for the individual farmer, and also for the community as a whole, if the country banker uses them to buy outside commercial paper, bank acceptances, and marketable securities. They should not be tied up unduly in local mortgages.

Gain in Public Utility Earnings

Gross earnings of public-utility enterprises in March, exclusive of telephone and telegraph companies, as reported to the Department of Commerce by 95 companies or systems operating gas, electric light, heat, power, traction and water services were \$199,000,000, as compared with \$195,000,000 in March, 1929. Total earnings for the first three months of 1930 were \$609,000,000, as compared with \$592,000,000 for the corresponding period of 1929, \$571,683,000 for 1928 and \$548,879,000 for 1927.

*Extracts from an address by Dr. Anderson delivered before the Tennessee Bankers' Association at Knoxville, May 16.

Promise of Development of Domestic Potash Industry

Test Wells in Texas Definitely Prove Occurrence of Potash Salts—Process Developed Indicates Potassium Sulphate Can Be Produced at a Texas Treating Plant for \$16 a Ton

The existence of bedded deposits of potash salts of such thickness and purity that they may be mined cheaply is demonstrated, according to the Bureau of Mines, as the result of the Governmental exploration program in Texas and New Mexico, conducted by that Bureau in cooperation with the United States Geological Survey. The principal potash mineral disclosed by the Government drilling is polyhalite, a sulphate of lime, magnesia and potash, which contains an average of 12 to 15 per cent of potash. Experiments by the Bureau of Mines at its Nonmetallic Minerals Experiment Station, New Brunswick, N. J., have resulted in development of a process which gives promise of economic production of refined potassium salts from polyhalite. Two products are obtainable, potassium sulphate and the sulphate of potash-magnesia, and mixtures of the refined sulphate and of the crude polyhalite can be made to yield the various commercial grades of mixed salts.

Estimates of the cost of production indicate that potassium sulphate can be produced at a treatment plant in Texas or New Mexico for approximately \$16 per ton and the double sulphate of potash-magnesia for approximately \$8 per ton. Although transportation charges to market must be added to these costs, it is shown that at present prices potash salts from Texas and New Mexico can be delivered to the principal markets of the United States more cheaply than foreign salts.

A study of foreign production costs indicates that, although a material reduction in the current prices of potash salts is possible, conditions in the industry are such that prices are likely to remain fairly stable at present levels as long as the Franco-German sales agreements remain in force and until the German industry has completed its present reorganization and concentration of production in the best mines.

Up to 1914 almost all the world's supply of potash came from Germany and Alsace. This dependence on foreign sources was strikingly emphasized by the acute shortage in this country that followed cessation of shipments from Germany during the World War. Shortage of potash, with resultant high prices, stimulated active development of

domestic resources. With the close of the war and arrival of large shipments of German potash at prices below pre-war figures, the American industry virtually collapsed. The two American producers that managed to survive have continued to operate successfully and now supply about 20 per cent of the American requirements. The country depends on foreign potash for the remaining 80 per cent of its needs.

Experience of the industry during the war showed that not only was a domestic source of potash required but that production must be at costs low enough to allow competition with foreign potash on a price basis.

Among domestic resources brought to the attention of the country during and after the war but not utilized as a source of potash, although it was indicated they might furnish the cheap potash desired, were the deposits occurring with the thick rock-salt formations of western Texas and southeastern New Mexico. In this area potash minerals were identified in the cuttings and sludges of wells drilled for oil. The evidence of these cuttings was inconclusive. Occurrence of potash salts was definitely proved, but the character, size and richness of the deposits could not be determined from samples and cuttings obtained. To obtain definite information, core drilling was necessary, and as private capital was reluctant to enter this field the Federal Government undertook the investigation. In 1926 funds provided by Congress for this purpose became available, and core drilling was begun by the Bureau of Mines in 1927. To date, 16 wells have been completed, 9 in Texas and 7 in New Mexico.

The salt formation extends northeasterly across western Oklahoma into central Kansas; but the important potash occurrences seem to be limited to the southern portion. The western edge of this basin conforms more or less closely to the present course of the Pecos River, while the eastern edge swings northward from Crockett County, Texas, through Reagan and Glascock counties. Final stages of the evaporation of the sea water, which resulted in deposition of the potash salts, took place in the minor basins and lagoons on the old sea floor. Products of this evaporation are

rock salt and anhydrite, with which the potash salts are interbedded in thin layers.

From a mining standpoint the potash beds may be considered as completely enclosed by the firm massive salt formation, a material of sufficient strength to stand exceptionally well in open mine workings and not subject to alteration or decay on exposure to mine air. The slight structural gradient of the synclinal basin amounts to only a few feet per mile, which for practical purposes in mining may be considered as level. Some local folding may be found, but in general throughout the area the deposits may be taken as horizontal.

Deposits disclosed by Government drilling occur at depths of 350 to 1,950 feet, but for a general estimate 1,200 feet may be taken as average. Salt formation in which deposits occur is overlain by a series of soft shales and sandstones in which thin beds of limestone also are found.

Further details are given in Bureau of Mines Bulletin 316, "Commercial Possibilities of the Texas-New Mexico Potash Deposits," obtainable from the Government Printing Office, Washington, D. C., price 25 cents.

\$750,000 Hotel Let to Contract

Columbia, S. C.—General contract to erect the 14-story Jerome Hotel here for Miss Esther O'Brien at a cost of approximately \$750,000, has been awarded to W. J. McDonald, New York. The building will be 90 by 180 feet, the typical floor size to be 92 by 90 feet. It will be equipped with one freight and three passenger elevators. Wilson & Tatum, Columbia, are the architects.

14-Mile Rail Line Contract

Williamstown, Ky.—The Southern Railway System has awarded contract to Bates & Rogers Construction Co., Chicago, to build about 14 miles of second main track between Williamstown and Blanchet, Ky., and between Sadleville and Rogers Gap, Ky., for the Cincinnati, New Orleans & Texas Pacific Railway Company, a subsidiary. The work involves 600,000 cubic yards of excavation.

IRON, STEEL AND METAL MARKET

Only a Slight Decline in Steel

Buying

Pittsburgh, May 19—[Special.]—Demand for steel has decreased slightly along some lines while some other decreases are in prospect, but on the whole there is very little decrease, and in one case, that of line pipe, the tonnage is increasing sharply.

While the trend in steel production has been downward during the last three weeks it has not been as marked as in other years, the ordinary year of the past showing peak production in March with quite a sizable decrease to a low July. It has never been adequately explained why there should be such a seasonal variation, to a low point just at the middle of the period of outdoor work, and some observers have held it was chiefly a matter of buying habits. That idea harmonizes with present conditions as with everyone so conservative buying is delayed as long as possible, leaving more for late spring and early summer.

Rail production in the Chicago district has decreased, earlier than usual, being reported at 80 per cent against close to 100 per cent for several months. The annual orders were exceptionally large but rolling began unusually early and there was plenty of steel to provide a high rate.

Fabricated structural steel awards reported last week totaled 43,000 tons, making a good week. There is nearly as much work on books as at the peak six months ago, equal to four to five months of operations.

Automobile production is equaling or exceeding its April rate, which was about 10 per cent over March.

Freight car orders reported in the week total 514 cars, making close to 30,000 for the year to date. Deliveries are at a slow rate so that the order book should carry the shops several months at the rate.

Steel ingot production averaged 80 per cent of capacity during April and may now be estimated at about 77 per cent, with prospect of a small further decrease in the next couple of months. Whether there will be the usual, though by no means invariable, upturn after July is problematical.

Finished steel prices have been showing further weakness. About the middle of January shapes and plates declined to 1.80c while in the last few weeks shading has grown so widespread that the market is quotable at 1.70c, with some special business done at less. Bars remain quotable at 1.80c as the

general market but there is no little shading. Galvanized sheets have followed the recent decline in black sheets and are now quotable at 3.20c to 3.30c. Cold rolled strips are easy. Bolts and nuts have been reduced 10 per cent on account of shading, the general discount being 73 per cent instead of 70 per cent, while rivets, also on account of shading, have been marked down \$4 a ton to 2.90c for large rivets.

Following the large orders for 22 and 24-inch natural gas line pipe reported a fortnight ago, to be filled by the new seamless product to be made at Gary, the long considered line from the Panhandle of Texas to Chicago has come to a head. Originally there were two rival projects and the various parties in interest had to get together, the gas producers, the pipe line interests and the distributors. Matters have all been arranged and Cities Service Company will lay the line, about 900 miles. This will be in fact a duplex line, one line of 24-inch to be laid this year and another of same size next year, over the same right of way. It is understood that National Tube Company has already received an order for 450 miles, Smith of Milwaukee to get the other half. It is doubtful whether National would be able to furnish this in seamless, with the large orders already booked, and it is understood that the new department at McKeesport, to make electrically welded pipe, is almost completed. This pipe would probably have 5/16-inch wall, the pipe weighing slightly under 80 pounds per foot, making 200 net tons per mile. Depending on distance apart of pumping stations and other considerations, capacity of a 24-inch line might carry 150,000,000 cubic feet a day or fifty billion a year.

Sales of Copper the Heaviest in Many Months

New York, May 19—[Special.]—Copper has again been the chief topic in non-ferrous metal circles over the past week. Sales were the largest since late last summer and indeed may have exceeded them, there being no exact method of checking up, particularly those sales made in the domestic market. It is probable that total copper sales during the first half of May were 190,000 tons as against an expected production of 125,000 tons for the entire month. Total sales for the month may well be 250,000 tons, or double the month's production.

Early in the week copper producers

advanced prices to 13 cents, home delivery, and 13.30c c. i. f. European ports, the first marking up since March, 1929. A few sales had been made previously as low as 12 cents, though general price levels were no lower than 12½c. The bulk of the purchasing has been at 12½ and 12¾c per pound.

The April copper statistics were more unfavorable than expected. Surplus stocks of refined copper increased 45,318 tons to a total of 301,338 tons, the largest since October, 1921. Surplus stocks of both blister and refined copper gained 47,432 tons to 570,013 tons. Production of refined copper at 124,531 tons was a decline of 2533 tons. Total shipments at 79,213 tons were the lowest for any month since 1923 and declined 24,954 tons for the month. United States mine production at 60,338 tons represented a decline of 878 tons.

It is predicted at this juncture that May statistics will be more favorable in that surplus stocks will have ceased gaining. It would not be surprising if surplus stocks were left around the 300,000-ton level, as at the close of April. Some observers have stated that heavy sales of the past few days will cause a decline in stocks in May to as great an extent as they gained during April. However these observers failed to take into consideration that much of the copper sold recently will not be delivered until June or July, or even beyond, thus not affecting the May statistics. The producers have stated that the bulk of sales were for June shipment. Thus of the 250,000 tons sold during May, probably 125,000 tons will have been for June shipment, 93,750 tons for May shipment and 31,250 tons for July delivery.

It is expected that the price of 13 cents will be unchanged for several weeks to come. Prices do not rise in the long run so much because of good buying as because of excellent consumption. So far there are no evidences of marked improvement in consumption. The present selling price allows some profit for the high cost producers. It is also a figure which is quite satisfactory for consumers.

One thing is certain—the stabilization which was the avowed object of the formation of the copper trade associations has failed materially. Within 14 months prices declined from 24c to 12c per pound, then came back to 13 cents. Neither has there been a steady flow of orders as intended. Buying comes in tremendous waves, such as that of August-September when prices were on the point of advancing, and again in the first half of this month. Those who

are skeptical of artificial means of rigging commodity markets point to copper as another example of failure along with rubber, sugar, coffee and a host of other commodities.

Business among the other major metals has been quiet. Lead prices were advanced \$2 per ton; tin has risen a trifle over previously-depressed levels; zinc has sagged a bit. Quicksilver prices have been marked up \$2 per flask to \$118 per 76 pounds because of greater demand and poorer supply. Silver has been weak, prices dipping under 41 cents per ounce.

General industrial and business conditions, in which the metal producers are concerned, show but little improvement. The pace in the steel industry, as well as prices, is on the decline. The automobile industry is a disappointing consumer of raw materials. However it is quite probable that the sharp decline in copper prices will have a beneficial effect on business in general since many lines of industry were awaiting lower prices, particularly the public utility companies.

Better buying of copper has brought in its wake an increased demand for lead. Thus cable manufacturers, who buy copper for the wires of their cables, took considerable lead for the cable coverings. In fact lead business has been the briskest in two months, amounting to about 9000 tons in a week. The advance in prices came early in the week when the New York price was lifted \$2 per ton to 5.60c per pound, while the quotation in the Middle West rose \$1, to 5.45c, East St. Louis. Later in the week London prices were declining and there was some question as to whether the new prices here would hold.

Zinc has sold at 4.60c and 4.65c per pound, East St. Louis. Demand was fairly active at times, though as a general thing poor. The price of zinc ore has been reduced \$2 per ton to \$33, the lowest in many years.

Tin conditions are but little changed. Sellers cannot interest tin consumers in purchases. The latter are not only skeptical of the price situation but do not have many orders on books requiring raw material for the manufacture thereof. Tin plate operations have dropped to 75 per cent of capacity as against 85 per cent three weeks ago. Tin statistics in themselves are still unfavorable. The recent bottom price in Straits tin has been 31¼c per pound, the lowest since 1922.

City Council of Guthrie, Okla., will soon call an election on a bond issue of \$450,000 for a gas distribution system, improved fire equipment, waterworks extension and flood control.

Pig-Iron Production Maintained

Birmingham, Ala., May 19—[Special.]—Production in both iron and steel is being well maintained in the South and sales made assure activity through second quarter and longer. Pig iron base price, \$14, No. 2 foundry, continues. Several melters have reason to expect steady operations while one or two have hopes of being able to speed up output. Seventeen blast furnaces are in operation with basic iron leading a little.

Among melters of pig iron, the pressure pipe makers are the more active, with shipments equal to production and the shops making five days a week with three shifts a day and output steady. New lettings are reported, the bulk of the movements being to the West and Northwest. Many foundries and machine shops are active, while stove foundries and other melters have been getting a share of business.

Steel ingot production is stated by leaders at about 90 per cent. Gulf States Steel Company has four out of six open hearth furnaces making steel but they are of 75-ton capacity. Two furnaces there are being rebuilt, increased to 90-tons. The Tennessee Coal, Iron & Railroad Company has 15 open hearth furnaces in operation at Ensley-Fairfield. These steel producers are somewhat larger in capacity than those of the Gulf States Steel.

Steel fabricating shops are busy but new business is not being received as actively as was expected a month ago. Reports are still encouraging as to new construction in which a considerable

tonnage of steel will be needed. Specifications are out on several buildings of size.

The coal mining industry is holding its own. Railroads have made purchases for 12 months' need, the Southern Railway to use around 750,000 tons besides 500,000 tons from their own mines here. The Louisville & Nashville will use 1,080,000 tons of Alabama coal and other railroads have been fairly liberal in their purchases. Coke is steady at \$5, base price. Scrap iron and steel is very quiet.

Quotations on pig iron and iron and steel scrap are as follows:

PIG IRON.

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$14.00; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$14.50; iron of 2.75 to 3.25 per cent silicon, \$15.00; iron of 3.25 to 3.75 per cent silicon, \$15.50.

OLD MATERIAL.

Old steel axles	\$14.00 to \$15.00
Old iron axles	14.00 to 15.00
Old steel rails	11.00 to 12.00
Heavy melting steel	10.75 to 13.00
No. 1 cast	10.00 to 11.00
Stove plate	10.00 to 11.00
No. 1 railroad wrought	10.00 to 11.00
Old car wheels	10.00 to 11.00
Old tramcar wheels	11.00 to 12.00
Machine shop turnings	7.00 to 8.00
Cast-iron borings	7.00 to 8.00
Cast-iron borings (chem.)	12.00 to 13.00

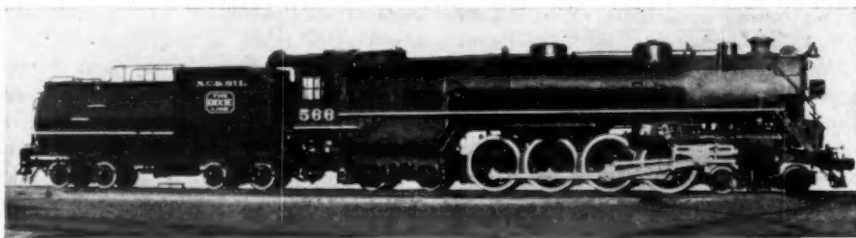
Colonizing East Texas Property

Jasper, Tex.—With a large acreage of cut-over timber lands in East Texas, the Southwestern Settlement and Development Company, Houston, is carrying out plans for the colonization of the territory under the general direction of Henry M. Richter. Much of the property has been laid out in farms and roads have been built.

Heavy Locomotive of New Design

The American Locomotive Co., at Schenectady, has delivered five heavy locomotives of a new design and wheel arrangement, especially developed for passenger and fast freight service, to the Nashville, Chattanooga & St. Louis Railway. Outstanding features include maximum power with minimum weight and refinement, also the utilization of many fuel saving accessories. Each locomotive, designed for a later application of a trailer-booster, develops a tractive force of 57,000 pounds at 250

pounds boiler pressure, and the trailer-booster will add 13,000 pounds tractive power. The new locomotives are equipped with the latest type E superheater, Bradford front end throttle, Worthington type S feedwater heater, Superior automatic flue blowers, Nicholson thermic syphons, Standard type BK stoker with stoker engine mounted on the tender, Nathan latest type water column, Bird-Archer type B sludge remover and pin hole type cast steel grates.



New Locomotive for Nashville, Chattanooga and St. Louis Railway.

HIGHWAYS AND MOTOR TRANSPORT

\$2,000,000 Paducah-Brookport Bridge Across the Ohio

In addition to serving as a main connecting link for through traffic from the Great Lakes region to the Gulf of Mexico and also as the gateway to St. Louis, Kansas City, Chicago, Cleveland and to points in the North and Northeast, the \$2,000,000 vehicular toll bridge completed last year over the Ohio River at Paducah, Ky., has been a major factor in widening the trade area of that city by at least 75 miles on the Ohio River's Illinois shore, with which the structure connects at Brookport.

The bridge proper is of the steel cantilever type, one mile long, and consists of 10 main steel spans. Seven of these are 396 feet long, one is 514 feet, and the channel span on the Kentucky side is 716 feet long. Trusses are of the riveted type. A mile of approach pro-

vides access to the bridge; to protect this sand fill approach from erosion from both high water and from heavy rains, 17,500 square yards of concrete slab four inches thick was placed both upstream and downstream to encase the slope completely. Crossing the river at a height 53 feet above high water, the 22-foot roadway of the structure is lighted with 41 overhead light standards. Paved roads run to each end of the project, the highway on the Kentucky side extending to Memphis, Tenn., and the highway at the other end, through Southern Illinois.

Design of the bridge was effected by Ash, Howard, Needles and Tammen, Kansas City engineers. The substructure was constructed by the Union Bridge Co., Kansas City, while the superstructure was handled by the Wis-

consin Bridge & Iron Co., Milwaukee. J. O. Patterson & Co., Kansas City, laid the bridge flooring, which consists of Haydite concrete base with Kentucky rock asphalt top. The Rouse Construction Co., Cape Girardeau, Mo., the R. Dron Electrical Co., Madison, Ill., J. W. Lockwood & Son, and the S. D. Dalbey Electrical Co., both Paducah, were the other firms connected with the undertaking.

Operation of the bridge, which is the first highway bridge over the Ohio from its mouth to Louisville, a distance of 250 miles, is under supervision of the Paducah-Ohio River Bridge Co., of which Richard Rudy, Paducah, is president, and H. L. Harker, Chicago, is vice-president. Financial arrangements were handled by P. W. Chapman & Co., Inc., Chicago and New York.



Ohio River Bridge at Paducah, Ky., an Important Link in Heavily Traveled Highway Routes

\$114,000,000 EXPENDED FOR ROADS

35 States Report on Awards During First Quarter of 1930

Washington, D. C.—Showing an increase of more than 100 per cent over the first quarter of 1929, highway construction expenditures in 35 states during the first quarter of 1930 amounted to more than \$114,000,000, according to a statement by Secretary of Commerce R. P. Lamont, based on reports from governors of the states involved. Expenditures during the first quarter of 1929 in these states amounted to \$50,910,133, the big increase in expenditures, according to the Secretary, being "especially significant in connection with the problem of spreading employment

throughout the year." Thirty governors of the thirty-five states filing returns report first quarter increases, while sixteen announced contract awards of 100 per cent or more above the corresponding period last year. Three states that awarded no road contracts in the first quarter of 1929 reported awards in the first quarter of 1930 of \$4,357,075. Ohio and Idaho show the greatest relative increases, the former reporting first quarter awards 11 times greater than a year ago and the latter 9 times greater. Pennsylvania led the states in dollar value of contracts, awarding \$15,469,853 the first quarter of 1930, as compared with \$2,282,813 in the first quarter of 1929. First quarter gains in Southern states include the following: Maryland, 225 per cent; North Carolina, 155 per cent; Missouri, 144 per cent; Florida, 109 per cent; Virginia, 100 per cent; Texas, 33 per cent; South Carolina, 28.8 per cent.

BIDS ON 370 MILES ROADS ASKED

Kentucky Contracts to Approximate \$5,500,000—Plans for \$4,000,000 Ohio River Bridge Ordered

Frankfort, Ky.—In connection with a program for building 600 miles of roads to close gaps in important through state highways, the Kentucky Highway Commission has designated 370 miles on which bids are to be opened June 6 and June 17. It is estimated that the cost of the projects to be awarded will approximate \$5,500,000, the first letting to embrace 200 miles and the later one 170 miles. The commission has ordered plans and specifications for a bridge across the Ohio River between Henderson, Ky., and Evansville, Ind., to cost about \$4,000,000, and a bridge across Green River at Brownsville.

St. Louis Gets 1931 Road Show

American Road Builders' Association Chooses Next Year's Convention City—
Install Officers and Directors

Decision to hold the 1931 show and convention of the American Road Builders' Association in St. Louis was reached at a meeting of the board of directors held last week in Washington. Business sessions of the parent body and separate sessions of all the divisions were held on Thursday and Friday. Plans were discussed for participating in an international exposition planned in conjunction with the Sixth International Road Congress to be held in Washington October 7 to 10 inclusive. Also, committee plans for research on various subjects were formulated.

Selection of St. Louis as the site of next year's show was not made without keen competition, for Houston, New Orleans, Atlanta, Kansas City, Mo., Atlantic City, Chicago, Cleveland, Toronto, Canada, and other cities sought to "land the show." In preceding years the association has met in Chicago, Cleveland and Atlantic City.

The St. Louis exhibition space includes three large buildings comprising the Highlands Arena, completed last year at a cost of several million dollars. The arena contains 75,000 square feet of display space, while two exhibit buildings, each 288 by 300 feet, provide 172,800 square feet of floor space. An open space, totaling 148,000 square feet, is available between the buildings and the railroad tracks for outdoor displays. During the summer a building suitable for convention sessions will be erected. The main building is 475 feet long, 276 feet wide, and the distance from the floor to the highest point of the roof is 135 feet. The center span of 165 feet employs the Lamella type roof, supported by 20 cantilever steel trusses, each weighing 18 tons. Starting from an anchorage footing in the ground, buttressed by 80 cubic yards of concrete and 10 tons of reinforcing steel, the trusses rise to 100 feet where they meet the vaulted roof, which eggshells 35 feet to the crown of the arch.

Lighting arrangements are said to be unique, floodlights being placed on an illumination bridge, circling the arena at the base of the roof. Another feature is the band stand, accommodating 75 musicians, suspended from the steel trusses of the structure.

Railroad sidings, adjoining the structures, have a capacity of 50 cars, and provision has been made for unloading at the arena 15 cars at one time so that unloading and loading of exhibits will be facilitated.

At the annual membership meeting

held last Friday new officers were installed as follows: W. A. Van Duzer, assistant chief engineer, Pennsylvania Department of Highways, president; C. E. Myers, director of transit, Philadelphia, president of the City Officials' Division; Stanley Abel, county engineer, Taft, Calif., president of County Officials' Division; M. A. Corroalles, chief engineer of roads and bridges, Havana, Cuba, president of Pan-American Division. Others installed include: American Road Builders' Association vice presidents—J. R. Draney, Natural Rock Asphalt Corp., Louisville, Ky.; Henry G. Shirley, State Highway Commissioner, Richmond, Va.; S. F. Beatty, president, Austin-Western Road Machinery Co., Chicago, Ill., and Samuel Hill, Washington State Roads Association, Seattle, Wash.; treasurer—James H. MacDonald, New Haven, Conn.; directors—C. M. Babcock, State Commissioner of Highways, St. Paul, Minn.; T. H. Cutler, chief engineer, Missouri State Highway Commission, Jefferson City, Mo.; H. J. Kaiser, Paving Co., Oakland, Cal.; W. M. Kinney, general manager, Portland Cement Association, Chicago; Wm. P. McDonald, Wm. P. McDonald Construction Co., Flushing, N. Y.; George F.

Schlessinger, general manager, National Paving Brick Manufacturers Association, Washington, and John G. Townsend, Jr., United States Senator from Delaware, Washington, D. C.

Other officials installed were: *City Officials' Division* vice presidents—L. W. Herzog, Commissioner of Public Works, Albany, N. Y.; Bryson Valias, City Engineer, New Orleans, La.; Geo. B. Sowers, Deputy Commissioner of Engineering and Construction, Cleveland, Ohio, and M. M. O'Shaughnessy, City Engineer, San Francisco, Cal.

County Officials' Division vice presidents—L. O. Marden, County Engineer, Worcester County, Worcester, Mass.; W. O. Washington, County Engineer, Cameron County, Brownsville, Texas; Otto Hess, County Commissioner, Kent County, Grand Rapids, Mich., and Geo. W. Jones, County Superintendent of Highways, Los Angeles County, Los Angeles, Cal.; Directors—H. M. Clark, County Roads Engineer, Wicomico County, Salisbury, Md.; B. W. Davis, County Engineer, Nash County, Nashville, N. C.; Arthur Hargreaves, County Highway Superintendent, Douglas County, Armour, S. C.; R. C. Hill, County Engineer, Sussex County, Georgetown, Del.; T. L. Pendergrass, County Superintendent of Roads, Durham, N. C.; Hal G. Sours, County Engineer, Summit County, Akron, Ohio, and Charles D. Vail, Chairman, Board of County Commissioners, Denver County, Denver, Colo.

Heavy Toll Exacted Through Failure to Push Paving Works

Unemployment Not Relieved By Projects That Remain On Paper

By E. E. DUFFY.

Paving delays are at present costing motorists all over the country sizeable sums of cash.

Hundreds of miles of street paving projects upon which preliminary planning has been done are still "paper" projects, despite the need for employment in cities and the need for more and better motoring space.

It is not as though the public were unconcerned, for most paving projects originate from the demands of citizens. Legal intricacies are often given as the reason for delays in paving matters, and no doubt many cannot be avoided, but for the most part such delays are more a state of mind.

The present is considered an ideal time for communities to build pavements. Aside from the fact that there is a dire need for more paved roads and streets, paving contract awards are going at reasonable figures. Contractors naturally desire to keep their paving outfits busy and their working forces intact. Pavements, particularly in towns and cities, are usually paid for by special assessment with payments spread

over a number of years. Communities paving now will not unduly burden themselves and they will aid employment.

The country's paving task is not only that of new construction but also that of reconstruction. Older and larger cities possess pavements that are hopelessly inadequate for modern traffic—to rebuild them is an absolute economy measure.

Unemployment still exists and regardless of promises made by various communities to expedite construction of public works, many have still to make actual progress. A project on paper does not give men jobs. Neither does it give motorists a place to drive.

By some odd quirk the period during which new city officials assume office, is also a season for delay in construction projects. But now that the new officers are ensconced there is no good reason why blue prints should not be transformed into hard surfaced pavements, school houses, court houses, sewers, and so on—without delay.

NEW AND IMPROVED EQUIPMENT

Rotary Surfacers with Pistol Grip

A new product of the Chicago Pneumatic Tool Company, New York, is the CP No. 88 rotary concrete surfacer, for use in finishing and smoothing concrete, eliminating form marks, and finishing



CP Rotary Concrete Surfacers

and polishing marble, granite and similar materials. Also it is employed in the rounding of corners and bringing stone to a highly polished surface. The tool has four vanes which rotate on a spindle in a casing having suitable openings for admission and escape of compressed air and is governor-controlled. It has a removable air strainer, a heavy duty radial and thrust ball bearing on the wheel end and a renewable hardened rotor liner.

Trackson Crawler Wheels

Simplicity, durability, easy and smooth-running operation are features claimed for the new crawler wheels produced by the Trackson Co., Milwaukee, Wis. Designed for wagons and trailers to meet heavy hauling requirements of contractors, highway builders, oil field operators, loggers, cane growers and others, these wheels are built of heavy alloy steel castings and drop forgings, each part



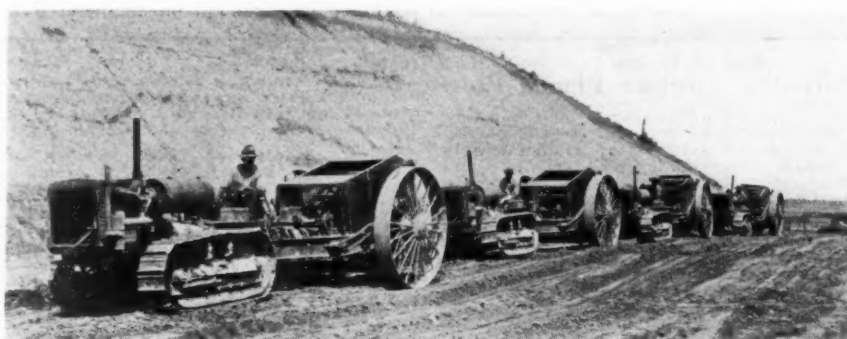
These Wheels Are Designed to Meet Heavy Hauling Requirements

being proportioned to provide a wide margin of safety over rated load capacities. According to R. D. Houghton, manager of the Trackson crawler wheel department, the wheels embody several notable improvements: Tension links of heavy drop forgings which function by moving to and fro within one another, without turning or grinding action; elimination of bolts and toggle links and other small parts; take-up device for tightening the track shoe loop by varying the wheel centers to suit different operating conditions, and split-type hardened steel bushings in the shoe hinges. The wheels are manufactured in four sizes, 6-, 10-, 15- and 20-ton load capacities.

Highway Trailer Scraper

Designed to operate in any soil, a self-loading, rear dump, two-wheel scraper made by the Highway Trailer Company, Edgerton, Wis., is described by the manufacturer as capable of doing the work of approximately six teams and nine men. It will pick up a load in 50 seconds, it is claimed, one man being able to operate a complete unit of scraper and tractor. Scraper pan is carried on an axle in a channel steel

frame, supported by two wheels and hooked to the tractor by a drawbar and pin. Power is taken from the rear of the tractor and carried to the transmission of the scraper by means of a compound universal joint and drive shaft. Two levers distribute power to the rakers by sprockets and chains, the pan being lowered or raised by steel cables winding in sheaves. Scarifier teeth are of manganese steel. The scraper is made in 2-, 3½- and 5½-cubic yard capacities.



These 4 Machines Removed 21,776 Cubic Yards of Material in 256 Working Hours

Keystone Drilling Machines

In the No. 3½ Keystone well drilling machine and the No. 1½ Keystone traction blast hole drill, made by the Keystone Drilling Company, Beaver Falls, Pa., recent developments are exemplified. The No. 3½ machine is equipped with a 35 H. P. crossmounted, 4-cylinder gas engine, rubber tired road wheels and dual rubber cushion shock absorbers for operation with wire line. It is of wood frame construction, having a depth capacity with Manila cable of about 400 feet and with wire line of about 800 feet. The machine is adapted for blast hole drilling in quarries.

The No. 1½ machine, weighing about 10,500 pounds, is of all steel construction but equipped for use with Manila cable. It is smaller and lighter than

the No. 3½ model and is equipped with rubber tired wheels for movement over hard roads, with a traction speed of about 8 miles per hour. This machine may be furnished with dual shock absorbers when desired to operate with wire line. It is powered with a 20 H. P. 4-cylinder crossmounted engine and will handle conveniently a 1600-pound drilling tool. The drum will spool about the same amount of Manila cable and wire line as that of the No. 3½ machine and has the same depth capacity, although the larger machine will handle heavier tools and drill more rapidly. Either machine may be furnished with plain, nontraction iron wheel mounting for operation in districts without improved roads or where it is desired to move the machines by means of tractors or draught animals.

Well Drilling Machine, Keystone Model 3½, Equipped with Dual Cushion Shock Absorbers.



CONSTRUCTION DEPARTMENT and NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

The Daily Construction Bulletin of the Manufacturers Record gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

Airports, Airplane Plants, Etc.

D. C., Washington—Dept. of Commerce, Washington, D. C., reported, expend \$7,944,000 on airways during year beginning July 1; provide air navigation facilities over about 900 mi. of routes not now open; about 3000 mi. of airways now unlighted will be equipped with beacons for night flying.

Fla., South Jacksonville—A. B. McMullen, of McMullen Aircraft Co., Tampa Blvd., Tampa, plans establishing combined land and seaplane base, Palm Park Field, South Jacksonville; erect hangars, install complete lighting system, extend field into St. Johns River to give full length runways in all directions; grading work under way.

La., Shreveport—City Council has plans and specifications under consideration for administration building and metal hangar at municipal airport, final acceptance to be made in few days; administration building, cream colored brick backed up with 8 inches of hollow tile, conc. floors resting on steel joists, fireproof; temporary all-steel hangar with conc. aprons; 100x100 ft.; provide machine shop, supply room, locker room, etc.; plans by Southern Air Transport, Inc., Fort Worth Nat'l Bank Bldg., Fort Worth, Tex., with Wings, Inc., as local agency, O. L. Hazelwood, Co.'s Archt.; B. A. Slater, Co.'s Engr. 5-1

Mo., St. Louis—Office of Chief, Div. of Supplies, Dept. of Commerce, Washington, D. C., opens bids June 6 for constructing St. Louis-Indianapolis Airway, consisting of installing about 20 revolving electric beacons and 2 electric code beacons, together with other necessary appurtenances and accessories; beacons, as a rule, will be mounted on 51-ft. or other height galv. steel skeleton towers, 3 beacons to be mounted on municipal water towers and tanks.

N. C., Fort Bragg—War Dept., Office Constructing Quartermaster, opens bids June 12 for lighting system, Pope Field.

Okl., Clinton—City plans improving airport.

Tenn., Dyersburg—City improve airport at once; lease 15 acres adjoining present field; field to be cleared and will grade 2000 ft. east-west runways.

Tex., Marshall—City Comsn. acquired 211-acre track, 3 mi. east of city for airport; plans improving field and erecting hangars.

Tex., San Antonio—City, C. M. Chambers, Mayor, voted \$100,000 bonds for improving Winburn Field. 4-10

Va., Culpeper—G. C. Brinckerhoff, College Park, Md., authorized by James A. Hayes, State Inspector of Aviation and Railroads, Richmond, to establish airport; establish flying school.

Va., Pulaski—City, Mayor E. W. Calfee, leased 55 acres on Strauss Farm for airport, to be known as Loving Field.

Bridges, Culverts and Viaducts

Proposed Construction

Arkansas—State Highway Comsn. received low bids for 8 bridges and approaches. See Roads, Streets, Paving.

D. C., Washington—Melvin Haxen, Dist. Surveyor, making survey for proposed viaduct over Metropolitan Branch of B. & O. R. R.; eliminate grade crossing at Michigan Ave.

Florida—State Road Dept., receives bids for 12 bridges. See Roads, Streets, Paving.

Fla., Tampa—War Dept., Washington, approved plans of Tampa Subway Corp., Tampa, for combined causeway and tunnel over and under Hillsboro Bay, 9.7 mi. from Tampa, under state law; plans include 110-ft. bascule span with 20-ft. clear height above mean low water, and tube, top of which to be at least 45 ft. below mean low water for distance of 800 ft. at main channel.

Ga., Augusta—J. W. Barnwell, Bridge Engr. of South Carolina State Highway Dept., Columbia, announces reconstruction will begin about middle of July on Fifth St. Bridge over Savannah River, Augusta, Ga., on U. S. Highway No. 1, connecting Georgia and South Carolina; total cost about \$260,000. 5-15

Ky., Henderson—President Hoover signed bill authorizing Louisville and Nashville R. R. Co., W. H. Courtenay, Ch. Engr., Louisville, to construct \$6,000,000 bridge over Ohio River at Henderson. 5-15

Ky., Louisville—City plans receiving bids soon for Kentucky & Indiana Terminal Railroad's grade elimination project on Thirty-first St., between Broadway and Walnut St.; cost about \$750,000; A. T. Fischer, special grade elimination engineer for city. 3-27

Louisiana—Louisiana Highway Comsn. received low bids for 2 bridges. See Roads, Streets, Paving.

Missouri—State Highway Comsn. receives bids for 15 bridges. See Roads, Streets, Paving.

Md., Baltimore—Bureau of Plans and Surveys, William O. Atwood, Chmn., will prepare preliminary plans for bridge across Gwynn's Falls connecting West Baltimore St. and Hilton St.; cost about \$500,000; also plans extending Baltimore St., cost \$1,500,000, considering \$2,000,000 loan next fall. See Financial News Columns.

Miss., Eddiceton—Franklin County Bd. of Supvrs., A. R. Moore, Clk., Meadville, receives bids June 2 for steel truss bridge, one 150-ft. and one 50-ft. spans, 16-ft. roadway, at Eddiceton.

Miss., Grenada—State Highway Dept., Jackson, receives bids June 3 for conc. bridges on Highway No. 51; estimated cost \$60,000; G. A. Draper, State Highway Engr. 1-2

Miss., Meridian—Lauderdale County Bd. of Supvrs., J. B. Holland, Clk., let contract to W. W. Speed for 3 small bridges in Districts 2 and 3. 4-24

Okl., Newkirk—Kay County Commrs. plan receiving bids soon for 3 bridges.

Okl., Purcell—State Highway Comsn., Oklahoma City, receives bids soon to widen present bridge over Walnut Creek, on U. S. Highway No. 77, South of Purcell, McClain County, 18 to 29 ft. and lengthen by two 34-ft. and one 120-ft. spans; A. R. Losh, State Highway Engr.

Tenn., Chattanooga—City, Roger Crow, Commr., considering plans for Tenth St. viaduct; W. H. Wilson, City Engr.

Tenn., Sparta—Dept. of Highways and Public Works, Nashville, plans 16-ft. bridge

near Sparta; replace bridge previously destroyed.

Tex., Bronte—Santa Fe Ry., subsidiary, Atchison, Topeka & Santa Fe R. R., G. W. Harris, Ch. Engr., Chicago, receives bids soon for 175-ft. rein. conc. steel bridge over Colorado River near Bronte, cost \$150,000. 4-3

Tex., Fort Worth—Prospective bidders for Henderson St. Underpass, bids to be opened May 27; L. H. Lacy Co., Burt Bldg.; South-west L. E. Myers Co., Allen Bldg.; Crocker & Fisher, 516 Allen Bldg.; Austin Bridge Co., 1813 Clarence St.; Parrott Construction Co., First National Bank Bldg.; McKenzie Construction Co., 510 Const. Bldg.; Ralph S. Windrow, Santa Fe Bldg.; all Dallas; Folwell Engineering Co., 333 N. Michigan Ave., Chicago; Gauger-Korsmo Construction Co., 910 Fidelity Bank Bldg., Memphis, Tenn.; R. B. Travelera, 614 South St. Andrews Place, Los Angeles, Cal.; L. T. Stanford, 1217 St. Louis Ave.; D. S. Foley Construction Co., 501 E. Rosedale; E. S. Newcomer, 812 Dan Waggoner Bldg.; Purvis & Bertram, 1012½ W. Ninth St.; H. K. McCollum, Ft. Worth National Bank Bldg.; Standard Paving Co., 251 Majestic Bldg.; James T. Taylor, 707 First National Bank Bldg.; Thos. S. Byrne, Inc., 1005 First National Bank Bldg.; General Construction Co., 414 Capps Bldg., all Fort Worth. 5-1

Tex., Houston—Maj. Milo Fox, U. S. Dist. Engr. Galveston, will hold public hearing May 22 on proposed bridge across Buffalo Bayou at McKee St.; lately noted rejected bids for bridge. 5-1

Tex., Port Arthur—City, J. C. Hamilton, Clk., receives bids May 29 for Pleasure Pier Bridge; Substructure: 5600 cu. yd. excavation; 2800 cu. yd. fill in approaches; 20,000 lin. ft. foundation piles; 4600 lin. ft. protection piles; 3500 cu. yd. conc.; 40,000 lb. rein. bars; 80,000 lb. substructure steel to be erected; Superstructure: 80,000 lb. substructure steel; 800,000 lb. superstructure steel; 66,000 lb. machinery; 28,000 lb. special steel castings; 34,000 b.f. treated timber and lumber; 510 sq. yd. asphalt plank and roadway floor; 70 cu. yd. conc. floor and sidewalks; 15,000 lb. rein. base; 2 operators' houses; entire electrical equipment; plans on file and from Scherzer Rolling Lift Bridge Co., 53 Jackson Blvd., Chicago; W. O. Bower, City Engr. 5-8

Tex., San Antonio—City, C. M. Chambers, Mayor, plans expending \$175,000 for bridges. See Financial News Columns. 4-10

Virginia—State Highway Comsn., receives bids for 2 bridges. See Roads, Streets, Paving.

Va., Norfolk—City, Walter H. Taylor 3rd, Dir. of Public Works, receives bids June 2 for highway bridge across northerly arm of Lafayette River, between Granby St. and Lakewood; 250 piles, 140 tons steel work, 500 cu. yd. conc., 40,000 ft. lumber. 4-10

Va., Portsmouth—City, Frank C. Hanrahan, Mgr., received low bid from C. Turner, of Turner Construction Co., Suffolk, at \$7945, for redecking City Park Bridge; C. B. Cross, Inc., Seaboard Bank Bldg., low bidder at \$14,025 for wooden bridge to extend Leckie St. into Shea Terrace over arm of Scotts Creek, 5-15 under Va., Norfolk.

Virginia—State Highway Comsn. received low bids for 2 bridges. See Roads, Streets, Paving.

West Virginia—See Roads, Streets, Paving.

West Virginia — State Road Comn. received low bids for 4 culverts and 3 bridges. See Roads, Streets, Paving.

Contracts Awarded

Miss., Columbus—Lowndes County Bd. of Supvrs., J. J. Richards, Clk., let contracts for 2 bridges: Wooden bridge on Robinson road near Artesia, J. M. Gibson; repair conc. work on bridge on Bent Oak road, Ellis & Ellis. 5-1

Miss., Hattiesburg—City, W. S. F. Tatum, Mayor, let contract to W. R. Fairchild, Seminary, Miss., for 90-ft. wooden bridge over creek, on road leading to municipal airport. 5-1

Missouri—State Highway Comn. let contracts for 2 bridges. See Roads, Streets, Paving.

Tenn., Hartselle—Virginia Bridge & Iron Co., Roanoke, Va., has contract for 400 tons struct. shapes for highway bridge over Cumberland River at Hartselle. 12-12

Tex., Marysville—Austin Bridge Co., 1813 Clarence St., Dallas, has contract for 200 tons conc. bars, for bridge over Sabine River, near Marysville, Tex., connecting Louisiana and Texas.

Canning and Packing Plants

Fla., Lakeland — Herbert D. Mendenhall, Drane Bldg., E. Main St., Archt., reported, has preliminary plans in progress for remodeling cannery; install conveyor, dryer, re-arrange present machinery; W. F. Cornell, Box 711, Efficiency Engr.

Fla., Fort Pierce — Fort Pierce Growers Assn., local unit of Florida Citrus Exchange reported, enlarge packing plant on S. Sixth St.; double present capacity; extension will include 20 ft. addition to present building on east, 32x90 ft., 6 room, 7 car capacity coloring plant just east of new extension; additional platform with loading capacity 5 cars; increase daily output to 7 cars.

Tex., Brownsville—Texas Citrus Fruit Exchange, Mission, reported, construct citrus packing plant. 2-6-29

Clayworking Plants

Tex., Dallas—Waterman Brick & Tile Co., Athletic Bldg., reported, erect \$15,000 building on Cedar Springs Rd.; M. D. Weeks, Archt., Shreveport, La.

Va., Woodbridge—The Rust Engineering Co., Koppers Bldg., Pittsburgh, Pa., advises proposed brick plant is still in a very preliminary stage; layout of plant is pending completion of tests on quality and quantity of material on property; if plant is constructed it is proposed to provide a first installation for making 75,000 brick per day. 5-30-29

Coal Mines and Coke Ovens

W. Va., Iroquois—Kohinoor Smokeless Coal Co., capital \$30,000, incorporated; J. C. Hindley, E. C. Sessler.

Cotton Compresses and Gins

Ark., Widener—St. Francis Gin Co. incorporated; A. G. Sweet.

Ga., Valdosta—Southern Cotton Oil Co., reported, install cotton gin.

N. C., Shelby—Mauney Gin Co., capital \$40,000, incorporated; W. M. Mauney, Shelby; H. H. Gold, Lattimore.

Tex., Commerce—Hendricks & McDonald, Abilene, reported, constructing \$30,000 cotton gin; will be operated as Independent Gin Co.

Drainage, Dredging and Irrigation

Ala., Birmingham—See Miscellaneous Construction.

La., New Orleans—Bd. of State Engrs., New Orleans Court Bldg., opens bids June 2 for following work in Pontchartrain Levee Dist.: Drainage of borrow pits, Mississippi River, Baton Rouge to New Orleans, approx. 50,000 cu. yd.

Louisiana—U. S. Engr. Office, First New Orleans Dist., Poland and Dauphine St., New Orleans, opens bids May 27 for dredging Louisiana and Texas Intracoastal Waterway, Atchafalaya-Vermillion section, Bayou Gregorie to Vermillion River, comprising 8,819,000 cu. yd., place measurement.

Mo., Wyatt—U. S. Engr. Office, McCall Bldg., Memphis, Tenn., opens bids May 29 for first unit of pipe drainage system for town of Wyatt and vicinity, made necessary by Bird's Point-New Madrid floodway levee;

system, reported, cost approx. \$600,000 including right-of-way and 20 bridges; first, unit cost about \$20,000, includes over 1 mi. pipe and 7 conc. catch basins.

Tex., Brownsville—Cameron County Water Improvement Dist., Lute P. Stover, Pres., P. O. Box 31, opens bids May 27 for construction work, including intake works at Rio Grande, about 12 mi. from Brownsville, pumping plants, main canals, distribution and drainage ditches for district comprising 15,000 acres; W. E. Anderson, Engr., San Benito. 5-15

Tex., Edna—Drainage Dist. No. 8 will vote on \$78,000 bonds for improving drainage system.

Electric Light and Power

Electric light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details.

D. C., Washington—Stone & Webster Engineering Corp., 49 Federal St., Boston, Mass., advises foundation being poured, steel erection to begin June 6 on Bennings Power Station, for Potomac Electric Power Co.; contract for conveyor equipment let to Jeffrey Mfg. Co., 955 N. Fourth St., Columbus, O. 4-24

La., Baton Rouge—Federal Government recently granted Baton Rouge Electric Co. permit covering erection of 66 kv. transmission lines over Mississippi River at Baton Rouge, on two 425 ft. towers, as part of line now nearing completion by Stone & Webster Engineering Corp., Boston, Mass.; line will transmit power from new Louisiana station of Louisiana Steam Products, Inc., a constituent company of Engineers Public Service Co., across river to existing system of Baton Rouge Electric Co. and also to Gulf States Utilities Co. 12-19

Miss., Laurel—L. A. Gilly, Laurel, reported, has contract for furnishing material and labor for constructing conc. swimming pool; J. R. Feazell, Laurel, for complete ornamental post street lighting system; Paul Klyce City Engr. 5-8

Mo., Bagnell — Union Electric Light & Power Co., Twelfth and Locust Sts., reported, let contract to Stupp Bros. Bridge & Iron Co., 3800 Weber Road, both St. Louis, for 700 tons structural shapes for Osage power plant. 4-24

N. C., Gibson—City, reported, voted to sell power plant and distribution system to Carolina Power and Light Co., Raleigh.

Tenn., Memphis—Memphis Power & Light Co. let contract to Phoenix Utility Co., Box 59, Memphis, for steam generating station; install 15,000 sq. ft. 350 lb. boiler; cost of equipment \$330,000, of building \$20,000; Mark Eldredge, Constr. Engr., Box 1515; Walsh & Weidner Boiler Co., Dermon Bldg., for boilers; American Blower Corp., 6000 Russell Ave., Detroit, Mich., for induced draft fan; B. F. Sturtevant Co., Inc., 16 Damon St., Boston, Mass., for forced draft fan; Virginia Bridge & Iron Co., Roanoke, for steel work; Dan Shea Boiler Works, 1106 Kansas St., Memphis, for steel stack; Forney Combustion Engr. Co., for combination gas and oil burners. 5-15

Tex., Mobeetie—Panhandle Power & Light Co., Borger, reported, construct \$3,000,000 power and light plant in north part of Wheeler county, 3½ miles east of old Mobeetie townsite; excavation begun; plans include erection of 75 houses for employees. Company wires: Plant at Mobeetie will consist of one unit 6500 kw.; steam pressure, 250 lbs.; natural gas fuel; will supply current to company's 66 kv. transmission line out of Borger; A. B. Taylor, Constr. Engr., Mobeetie plant, designed by United Light, Power, Engineering & Construction Co., Kansas City, Mo.

Tex., Seguin—Sumner Sollitt Co., National Bk. of Commerce Bldg., San Antonio, has contract for dams on Guadalupe River between Seguin and Gonzales for Texas Hydro Electric Co.; work includes 19,000 yds. conc. 623 tons rein. steel; 362 tons struc. steel; 68,000 yds. excavation; 274,000 yds. embankment. 5-15

Va., Reusens—Appalachian Electric Power Co., Roanoke, rebuilding and enlarging hydro plant at Reusens, on James River about 4 miles above Lynchburg; expend \$1,200,000; require about 2 years for completion; treble present capacity; enlarge dam to raise James River approximately 9 ft.;

install new machinery; finished plant have 5 vertical generators total capacity 17,500 h.p.; supply practically all Lynchburg; plans call for removal of 5 ft. from level of present dam, in place of this will be 15-ft. steel gates, automatically controlled and operated; gates supported on conc. piers, built against downstream face of dam; both buildings now at Reusens will be used and third constructed to house machinery and equipment; replace some of present equipment; replace present 132,000 volt transformers with ones of greater capacity; rebuild switching equipment; construction work only in preliminary stages; company plans work with own forces. 5-8

W. Va., Boncar—Electro Metallurgical Development Co. of America, subsidiary of Union Carbide & Carbon Co., Carbide & Carbon Bldg., New York, reported, plans constructing steam power plant.

W. Va., Marlinton—West Virginia Public Service Co., subsidiary of Monongahela West Penn Public Service Co., Fairmont, reported, acquired city light plant subject to vote on June 19; plans high tension line from Webster Springs to Marlinton.

Fertilizer Plants

N. C., Wilmington—Pearsall Fertilizer Co., E. Wilmington, reported, rebuild portion of plant, burned at loss of \$15,000.

Foundry and Machine Plants

Ala., Birmingham — American Cast Iron Pipe Co., 2930 N. 16th St., has permit for \$50,000 foundry, 16th St. and 29th Ave.

Ala., Birmingham—Whiting Corp., T. S. Hammond, Pres., Harvey, Ill., wires: "Whiting Corp. has acquired control of Goshlin-Birmingham Mfg. Corp., Birmingham; in addition to present Birmingham Goshlin lines, will manufacture 7 distinct lines, covering practically every field of industrial endeavor as follows: Cranes of all types, including electric traveling cranes up to 300 tons capacity for use in power plants, railroad shops, foundries and industrial plants; complete line of foundry equipment, including cupolas, charging machines, ladles, tumbling mills, dust filters, core ovens, etc.; extensive line of special equipment for railroad shops, including drop tables and hoists for wheeling locomotives and cars, transfer tables, cross-over bridges, car washing machines, etc.; complete line of evaporators, crystallizers, recovery systems for pulp mills and special chemical equipment, pulverized coal systems for firing boilers, metallurgical furnaces, ovens, etc., automatic stokers for small boilers."

Fla., Jacksonville — Oco Pump Co., incorporated; R. B. Owens, 703 Goodwin St.; tools and machinery.

Ky., Ludlow—Richard B. Carran & Sons, operating brass foundry, let contract to Ferro Concrete Construction Co., Third and Elm Sts., Cincinnati, Ohio, for \$30,000 plant addition; 1 story, 50x56 ft.

La., Mansfield—De Soto Foundry & Machine Co., Ltd., D. W. Derrick, Secy., increasing capital to \$150,000.

Mo., North Kansas City, Kansas City — Monarch Wrecking Co., 1915 Locust St., acquired 5-acre tract; will erect machine shop, garage and material sheds; main building, 60x185 ft., brick, storage sheds in rear.

Okla., Tulsa—Oil Well Improvement Co. with plant, Sand Springs Rd., manufacturing oil field equipment, acquired land and buildings and will now expend \$45,000 for additional building and addition manufacturing machinery and facilities; erect plant, 30x90 ft., mill construction, equipped with modern facilities; will include pattern shop, pattern storage room and cleaning room for castings produced in foundry.

Tex., Houston—Mosher Steel & Machinery Co., 5209 Maple St., Dallas, acquired site adjoining office, Washington Ave., for future expansion of plant.

W. Va., Charleston—West Virginia Machine Co., Inc., capital \$25,000, chartered; W. E. Gilkesin, 113 Oakhurst St., Bluefield.

Garages and Filling Stations

Ark., Pine Bluff—Triple Service Station, 317 Pine St., merged with Thompson's Garage, 404 W. Second St.; new business to operate at 317 Pine St.

D. C., Washington—Comms., District of Columbia, Dist. Bldg., opens bids June 10 for constructing fireproof building to be used as garage, shops and laboratories and for fireproof addition to D. C. auto repair shop, including remodeling present repair shop; contents, garage, shops and laboratories 1,205,675 cu. ft.; addition to repair shop 293,625 cu. ft.

Fla., Miami—Orange State Oil Co., N. E. 58th Terrace, plans erecting several service stations in Greater Miami area during summer.

Ga., Atlanta—Following have sub-contracts in connection with service station of Hugh Richardson, Jr., 160 Peachtree St., N. W., to be occupied by Dobbs Consolidated Tire Co., 400 W. Peachtree St., N. W.; Rein. steel, mesh, steel sash, etc., Truscon Steel Co., Wynne-Clawton Bldg.; struct. steel, iron work, F. E. Gollan Co., 101 Marietta St.; limestone, Capital Stone Co., 214 Terry St., S. E.; millwork, Pattillo Lumber Co., Healey Bldg.; comp. roofing, Philip Carey Co., Bona Allen Bldg.; tile roofing, Applewhite & Lawler, Citizens & Southern Bank Bldg.; sheet metal, R. F. Knox Co., 575 Marietta St., N. W.; glass and glazing, Pittsburgh Plate Glass Co., 180 Alabama St., S. W.; elec. work, Dixie Electric Co., 191 Spring St., N. W.; plumbing and heating, Stephenson Co., Inc., 143 Spring St., N. W.; La Due & Young, Archt., 1144 E. Market St., Akron, Ohio; A. K. Adams & Co., Gen. Contr., 542 Plum St., N. W.

Ga., Atlanta—Mrs. Barry Wright, Rome, let contract to Capitol Construction Co., Standard Bldg., for filling station, 147 Courtland St., N. E.; 1 story, brick, steel, comp. roof.

Ga., Gainesville—Wofford Oil Co., 140 Spring St., S. W., Atlanta, Gainesville Oil Co., Horace P. Hawkins, Pres., Local Agt., let contract to E. F. Hettick, Norris Bldg., Atlanta, for \$20,000 filling station, N. Green St. and Brenau Ave.; brick, conc. roof, struc. steel, conc. footings. 5-15

Md., Baltimore—Atlantic Refining Co., 260 S. Broad St., Philadelphia, Pa., acquired site, 5041-5043 Reisterstown Rd., for filling station.

Mo., Cameron—C. M. French Motor Co., capital \$15,000, incorporated; C. M. French, B. L. Kingsland.

Mo., Charleston—Shelby Motor Co., Inc., capital \$20,000, incorporated; Mrs. N. A. Martin, George U. Shelby.

Mo., Joplin—Erwin-Chapman Tire Co., capital \$50,000, incorporated; W. M. Erwin, Joplin; R. M. Kemmel, 920 Columbia St., Akron, Ohio.

Mo., Kansas City—Diamond T Motor Car Co., 4517 W. 26th St., Chicago, Ill., manufacturer of motor trucks, let contract to L. Breitag & Son Construction Co., Ry. Exch. Bldg., for factory branch, service, repair and sales building; 100x132 ft.; \$100,000 with equipment; E. O. Bronstrom, Archt., Reliance Bldg.

Mo., St. Louis—L. C. Wilderman Lubricating Co., 1929 Kingshighway Blvd., let contract to Duffner & Stecker Construction Co., 119 N. Seventh St., for filling station, Seventh St. and Franklin Ave.; Angelo B. M. Corrubia, Archt., Arcade Bldg. 5-8

N. C., Goldsboro—Spence and Marshburn, Inc., capital \$100,000, chartered; R. E. Spence, 304 E. Center St., Goldsboro; L. D. Marshburn, Sunset Park, Wilmington.

Okla., Oklahoma City—Julius L. Burtisch, 3210 S. Robinson St., erecting super-service station costing \$22,000, including equipment; 1 story, 100x140 ft., conc. floors, built-up comp. roof; includes service station, tire room, garage, battery room, wash rack, grease rack, brake and wheel room and cafe; Secor & Milner, Gen. Contrs., Hales Bldg. 5-15

Okla., Oklahoma City—Packard Motor Car Co., Joe Eisele, 201 W. 10th St., in charge has final plans in progress for garage; brick, conc., 2 story, 95x190 ft.; Joe I. Davis, Archt., First Natl. Bldg.

Tenn., Memphis—Lion Oil Refining Co., Eldorado, Ark., acquired Pennsylvania Oil Co., 613 S. Front St., operating 21 filling stations and 4 bulk terminals; stations in Memphis and Jackson, Tenn., and in Northern Arkansas.

Tex., Fort Worth—Hi-Mount Service Station, Paul Hadley let contract to W. C. Harms, 3133 Eighth Ave., for \$15,000 service station, Camp Bowie Blvd., Crestline and Virginia Pl.; 3 buildings, 89x190x162 ft., 1 story, conc., stucco, tile and conc. floors, steel beams and sash, conc. drives, tar and gravel, and tile roof; Ervin & Godwin Archt., Dan Waggoner Bldg.

Tex., Orange—See Port Arthur.

Tex., Port Arthur—Firestone Tire & Rubber Co., Akron, Ohio, erect service stations in Port Arthur and Orange costing about \$90,000.

Tex., Fort Worth—Bergman Produce Co., 801 W. Rio Grande St., has foundation laid for \$28,000 garage and general work shop; 1 story, 100x160 ft., comp. roof, conc. floors, conc., steel, brick; owner builds; C. T. Hodge, Archt., Keene Bldg. 5-15

Tex., Port Arthur—N. M. Barrier Realty Co., 301-325 Austin Ave., let contract to J. E. Baker, Fifth St., at \$34,000 for storage garage and filling station; 2 story, 75x140 ft., conc. and wood roof, brick, steel; Floyd P. Johnston, Archt., Goodhue Bldg., Beaumont. 5-8

Tex., San Antonio—Texas Co., Houston, let contract to C. A. Weber, 607 Fulton St., for filling station, E. Commerce and Mesquite st.; 1 story, brick, rein. conc.; private plans.

Tex., Terrell—Campbell Motor Co., Inc., capital \$15,000, chartered; Mrs. M. Lavelle, A. Campbell.

Tex., Houston—Humble Oil & Refining Co., Humble Bldg., has permit for \$11,000 filling station, 4924 Main St.

Tex., Vernon—Key Motor Co. acquired Scott-Jennings Motor Co.

Gas and Oil Enterprises

Ala., Athens—Limestone County Oil Co., capital \$20,000, incorporated; W. B. Buchanan, H. L. French.

Alabama—Southern Natural Gas Corp., First National Bank Bldg., Birmingham, will soon offer new issue of \$11,500,000 6% convertible sinking fund gold debentures series of 1944, through G. L. Ohrstrom & Co., Inc., 27 William St., New York. 5-8

Alabama—Southern Natural Gas Corp., Birmingham, let contract to National Tube Co., Pittsburgh, Pa., and A. O. Smith Corp., Milwaukee, Wis., for pipe involving expenditure of \$3,750,000; pipe to be used for \$15,000,000 extension of lines into Mobile, Selma, Auburn, Opelika and Montgomery, Ala.; Macon, Milledgeville and Griffin, Ga.; and Pascagoula, Jackson, Biloxi, Hattiesburg, Miss., and perhaps other points in the three states traversed by transmission lines of Southern Natural Gas Co. 5-8

Ga., Barnesville—Southern Natural Gas Corp., Atlanta, reported, granted gas franchise.

Ga., Cochran—Southern Natural Gas Corp., Watts Bldg., Birmingham, Ala., granted gas franchise at Cochran; applied for gas franchise at Hawkinsville.

Ky., Corbin—Petroleum Exploration Co., Sistersville, W. Va., reported, has gas franchise; work on installation to begin in 4 months.

Ky., Somerset—Craftsmen Oil Co., incorporated; Charles Healer, Guy P. Fuller.

La., Mansfield—Lacy Oil Co., Inc., capital \$40,000, incorporated; W. B. Hewitt, W. G. Ricks.

Miss., Hattiesburg—Mississippi Service Co., 209 Front St., subsidiary of Central Public Service Co., 105 W. Adams St., Chicago, Ill., reported, closed contract with Southern Natural Gas Co., Birmingham, Ala., for distributing gas; also has gas distributing franchise in Meridian. 5-30-29

Mo., Sedalia—City Light & Traction Co., subsidiary of Cities Service Gas Co., Bartlesville, Okla., reported, completed survey for natural gas pipe line to here. 5-16

N. C., Asheville—Asheville Oil Co., capital \$100,000, incorporated; R. H. Dial, 99 Cloyes St., West Asheville.

N. C., Durham—Durham Oil Corp., capital \$50,000, incorporated; H. S. Tilley, 1106 N. Duke St.

N. C., Durham—Carolina Gas & Oil Co., capital \$100,000, incorporated; A. W. Couch, 106 Seemon St.

Oklahoma—Sinclair Consolidated Oil Corp., Sinclair Bldg., Tulsa, has contracted to buy all assets and business of Pierce Petroleum Corp., 52 Wall St., New York, to take effect as soon as contract is ratified by stockholders of Pierce Petroleum Corp., meeting June 12; assets include 707 bulk distributing plants and 969 service stations in U. S., 1100 railway tank cars, complete refinery at Sand Springs, Okla., with normal crude oil charging capacity of 9000 bbls. daily, terminal at Texas City, Tex., 400 miles of pipe lines and interests in prospective oil lands; in Texas, Oklahoma, Missouri and Arkansas will acquire more than 1500 bulk and service stations.

Okla., Guthrie—See Water Works.

Okla., Guthrie—City, reported, considering gas plant.

Okla., Tulsa—Stockholders of Skelly Oil Co. voted to amend company's charter to permit issuance of \$12,000,000 of 6% preferred stock.

S. C., Gaffney—South Carolina Gas Co. incorporated; Byron T. Gifford, James P. Gilles.

Tenn., Chattanooga—Tennessee Natural Gas Corp., Hayes Brummitt, 502 Houston St., reported, begin work soon on laying natural gas system; has franchise; surveys to begin in about 10 days; gas to be brought from Sunbright fields. 2-6

Tenn., Fountain City, Knoxville—Tennessee Gas Co., Bryon T. Gifford, Pres., 22 W. Monroe St., Chicago, Ill., reported, filed application with State Railroad and Public Utilities Comsn., Nashville, for gas franchise; has completed preliminary survey; Knoxville Gas Co. and Tennessee Gas Co., 22 W. Monroe St., Chicago, Ill., applied for gas franchise; hearing June 4.

Texas—Frank Phillips, Pres., Phillips Petroleum Co., Bartlesville, Okla., reported, organized Phillips Natural Gas Co., which will carry on certain activities for Phillips Petroleum Co. in natural gas industry and Phillips Petroleum Utilities Co., which will primarily distribute liquefied petroleum gases and co-ordinate Phillips Petroleum Co.'s other activities in utility divisions; both companies capitalized at 100,000 no par common shares each.

Texas—Missouri-Kansas Pipe Line Co., 650 Otis Bldg., Chicago, Ill., reported, let contract to Oklahoma Construction Co., 5500 Holmes St., Dallas, for 725 miles pipe line from Texas Panhandle to number of northern cities. 5-8

Tex., Beeville—E. S. Price Oil Corp., incorporated; E. S. Price, Wm. Nagel, Jr.

Texas—United Gas Co., Esperson Bldg., Houston, reported, considering plans for acquisition of Consolidated Gas Utilities Co., First Natl. Bank Bldg., Oklahoma City, Okla., and Northern Texas Utilities Co., Wichita Falls, Texas; United Gas Corp. has option until June 23 to purchase Northern Texas Utilities Co.

Texas—Texas Gas Utilities Co., subsidiary of Appalachian Gas Corp., Union Trust Bldg., Charleston, W. Va., reported, closed contract with Ryecade Oil Co. for purchase of gas rights of Ryecade Co. in 2 wells on Chittim ranch; supply natural gas to Eagle Pass, Del. Rio, Devil's River project of Central Power & Light Co. and other towns in Winter Garden district; Brokaw, Dixon, Garner & McKee, Engrs., 120 Broadway, New York, have control of gas properties and let contract to N. A. Saigh Co., 510 Builders Exchange Bldg., San Antonio, for construction lines from well to towns. 5-15

Texas—Continental Construction Co., Professional Bldg., Kansas City, Mo., reported, formed by Insull, Son & Co., Inc., 20 N. Wacker Drive, Chicago; Henry L. Doherty & Co. and Cities Service Co., both 60 Wall St., New York, and other interests to construct pipe line from Panhandle to Chicago, work on which will soon begin; Cities Service Co. offered rights to stockholders of common stock of May 29, valued at \$42,750,000, to permit purchase of \$120,000,000 of 5% convertible debentures, due 1950; issue underwritten by Harris, Forbes & Co., New York, and associates; proceeds of issue, with surplus earnings, will provide for 1930 expansion program to cost \$155,000,000. 5-8

Tex., Galveston—Interstate Oil Corp., incorporated; A. H. Blackshear, 1616 F St.

Tex., Megargel—Rickey Oil Co., incorporated; H. A. Rickey, R. S. Ragsdale.

Tex., Pampa—H. F. Wilcox Oil & Gas Co., 603 S. Detroit Ave., Tulsa, Okla., acquired Pampa Refining Co.'s 4000 bbl. refinery in Gray County; reported, plans erection of cracking units; 2 additional units now being added to Wilcox company's plant 6 miles from Pampa, giving recovery capacity of 12,000 gals. daily. 3-27

Tex., Waxahatchie—Triangle Corp., capital \$50,000, incorporated; K. Hughes, W. F. Bane.

Va., Abingdon—Gulf Refining Co., Frick Annex, Pittsburgh, Pa., reported, acquired site E. Abingdon; construct oil storage and distributing plant.

Va., Richmond—Columbia Gas & Electric Co., 61 Broadway, New York, reported, negotiating with city to supply natural gas; plans building 24-in. pipe line from Kentucky gas fields to Philadelphia passing through Maryland and Virginia.

W. Va., Bridgeport—Jevrian Corp., subsidiary of Standard Oil Co. of New Jersey, 26 Broadway, New York, reported, acquired holdings of Bridgeport Oil & Gas Co., Northwestern Oil & Gas Co., Bridgeport Lamp Chimney Co., and Aispuru Oil & Gas Co., all of Bridgeport.

West Virginia—Midland Natural Gas Co., Edward R. Berry, Pres., E. R. Diggs, 46 Cedar St., New York, Director, offering 115,000 shares of participating Class A stock, through E. R. Diggs & Co., Inc.; company

organized under laws of Delaware will own and operate directly or through subsidiaries, natural gas properties totalling more than 15,000 acres in Pennsylvania and West Virginia in Appalachian District; additional pipe lines, on which field work has been started are expected to move gas from this district to seaboard cities of New York, Baltimore, Washington and Wilmington; operation of Midland Natural Gas Co. and its subsidiaries will be under direction of Midland Management, Inc., which also directs operation of Twin States Natural Gas Co. and subsidiaries of Inland Utilities, Inc. 5-15

West Virginia—United Corp., 23 Wall St., New York, utility holding company of Morgan-Bonbright-Drexel interests, reported, may acquire block of approximately 2,925,000 shares of common stock of Columbia Gas & Electric Co., 61 Broadway, New York; Bd. of Directors of Columbia Gas & Electric Corp. approved acquisition; also reported, that Columbia Gas & Electric Corp. had contracted, subject to approval by Public Service Comsn., New York, to acquire Empire Gas & Fuel Co. and associated units which own gas fields and distribution properties serving gas customers in vicinity of Wells-ville and Hornell, N. Y.; contract concluded between Louisville Gas & Electric Co. and Cincinnati Gas & Electric Co., a Columbia unit, for construction of transmission line between generating plants of 2 companies. 10-17

W. Va., Charleston — Directors of Twin States Natural Gas Co. authorized issuance of 40,000 additional shares of no-par common stock; proceeds to be used for development and expansion; E. R. Diggs & Co., Inc., 46 Cedar St., New York, and 205 Court Square Bldg., Baltimore, Md., recently offered 100,000 shares participating class A stock. 4-3

Ice and Cold-Storage Plants

Ark., Luxora—F. Johns let contract to Reed & Duecker, 171 N. Main St., Memphis, Tenn., for ice plant equipment; 6 ton capacity; construction to start in summer or fall.

Ga., Columbus—Columbus Electric & Power Co. plans to improve ice plants in South Georgia.

Ga., Barnesville—W. R. Crossfield remodeling W. S. Jones ice plant, recently acquired; will operate as Crossfield Ice Co.

Ky., Dawson Springs—A. H. O'Kane and associates, Nashville, Tenn., have plans for \$25,000 ice plant.

Mo., Kansas City—City Ice Co., Arthur Hardgrave, Pres., 21st and Campbell St., acquired American Ice Co., Spring and Wyandotte St., operating ice plants in city.

Tex., Dallas—Associated Gas & Electric Co., 61 Broadway, New York City, acquired Southern Ice & Utilities Co., serving 300 communities in Texas, Oklahoma, Arkansas and Louisiana; operates ice and ice cream plants.

Tex., Goose Creek—Community Ice Co., acquired site for \$70,000 ice plant.

Tex., Sherman—C. C. Mayhew advises ice plant will not be erected at this time. 5-15

Tex., Sinton—Central Power & Light Co., San Antonio, plans erecting ice plant.

Iron and Steel Plants

Mo., Kansas City—Sheffield Steel Corp., W. L. Allen, Pres., Sheffield, Kansas City, and American Rolling Mill Co., Middletown, Ohio, reported, merged, forming \$190,000,000 corporation expand facilities here.

Mo., Kansas City—Geo. M. Verity, Chrmn., Charles R. Hook, Pres., American Rolling Mill Co., Middletown, Ohio, and W. L. Allen, Pres., Sheffield Steel Corp., announce that directors of American Rolling Mill Co. and Sheffield Steel Corp. have successfully concluded negotiations for combining interests of the two companies; when arrangements are completed combined companies will have plants at Middletown, Zanesville and Columbus, Ohio; Ashland, Ky.; Butler, Pa.; Kansas City, Mo., and Oklahoma City, Okla.

Va., Tenn., Bristol — Twin City Boiler Works, Inc., W. J. Tilley, Secy. and Treas., changed name to Bristol Steel & Iron Works, Inc., and increased capital \$15,000 to \$200,000.

Land Development

Ark., Hot Springs—Hot Springs Golf and Country Club construct 18 hole golf course; cost \$100,000.

D. C., Washington — National Woman's County Club constructing 9 hole golf course

adjoining Bradley Rd.; work under direction of Fred Finley, Golf Archt., 2558 University Place, N. W.

Fla., Daytona Beach—Deckle & Pierson, Inc., chartered; J. H. Pierson, H. L. Cox.

Fla., Lakeland—Pearson & Moffett, Inc., chartered; H. F. Pearson, Benjamin Moffett.

Fla., Miami Beach—C. J. Dulbs Co., Inc., chartered; C. J. Dulbs, 530 Michigan Ave.

Fla., Miami—Schulman Realty Corp., incorporated; Harry I. Lipnitz, Lawyers Bldg.

Fla., West Palm Beach—Johnston Properties, Inc., chartered; Harry A. Johnston, First American Bank & Trust Bldg.

Fla., Tampa—Garcia Properties, Inc., chartered; R. Garcia, 211 W. Park Ave.

Fla., Winter Haven—Highlands Growers, Inc., capital \$50,000, chartered; W. M. Hampton, A. J. Cruden.

La., Coshatta — Red River Real Estate Corp., Inc., capital \$100,000, chartered; Robt. A. Giddens, John W. Tatum.

La., Monroe—H. & S. Masur, Inc., chartered; Herman Masur, 103 DeSiard St.

La., Opelousas—Belle Cheney Springs Land & Development Co., Inc., capital \$36,000, chartered; J. P. Barnett, George Bienvenu.

Miss., Hattiesburg—D. C. Bowling, Aurora, Ill., and associates of Chicago, Ill., reported, acquired 54,000 acres in southern Mississippi near Hattiesburg.

Mo., St. Louis — City plans \$50,000 improvements, Francis Park.

Miss., Gulfport—City, James A. Barksdale, Engr., preparing plans for water works extension; install 2 miles pipe, 20 fire hydrants; cost \$12,000.

Mo., St. Louis—City Park Commrs., reported, plan improvements to Francis Park, grade, etc.

Mo., St. Louis—Security Construction Co., Inc., chartered; E. G. Neal, 2130 Cleveland Place.

N. C., Charlotte—City acquired 88 acres on Statesville Rd. outside city limits for cemetery; will develop immediately.

N. C., High Point — Meadowbrook Golf Courses, Inc., P. A. Warner, Sec., 221 Elm St., develop golf course; temporary sand greens and club house to be built now, permanent grass green and club house to be started in 90 days. 5-15

N. C., Winnsboro—Winnsboro Plantation Co., capital \$100,000, incorporated; George R. Foulke, Jr., Winnsboro; John Bright Hill, Southern Bldg., Wilmington.

Tex., Brady—Lon P. Pipe, Grand Courts, 755 E. Mulberry St., San Antonio, and associates, reported, expend \$25,000 in improvements to Richland Springs Caverns, 35 miles east of Brady; build tourist cottages, bathing facilities, golf course, water well, etc.

Tex., Dallas—Claude D. Cain, Marvin Bldg., acquired 57 acres in Oak Cliff; develop subdivision; Myers, Noyes & Forrest, Landscape Engrs., Mercantile Bank Bldg.

Tex., Harlingen—Carter Developments, Inc., chartered; H. H. Roddy, J. M. Kopp.

Tex., Houston—Robt. R. Kelly, Pres., Pasadena Place, Inc., Chronicle Bldg., develop subdivision, Shaver St.; installing sewers, gas and electricity, grade streets, etc.

Tex., Houston—John H. Tucker, 3230 Del Monte St., acquired 13 acres on Hillendahl Rd.

Tex., Houston—Eastlawn Co., capital \$75,000, incorporated; J. W. Hazard, 1810 Travis St., develop 175 acres subdivision, near Park Place.

Tex., San Antonio—Del Monte Development Co., 808 Maverick Bldg., Thos. T. Taylor, Pres., develop Del Monte subdivision, 648 acres in Zavalla County; build reservoir, lay water mains; install water works; electricity and gas; erect 21 buildings for business and 15 residences; W. N. Hagy, Archt., 808 Maverick Bldg.; G. M. Jowers, Constr. Engrs., and Landscape Archts., Crystal City, contracts for work to be let by bids. See Want Section—Machinery and Supplies and Building Material.

Tex., San Antonio—See Sewer Construction.

Tex., Houston—LaPorte Houston Realty Co., incorporated; Frank L. Holton, 1523 W. Main St.

Va., Newport News—City votes June 10 on \$50,000 park and playground bonds.

Va., Norfolk — Nelson-Parrish Holding Corp., capital \$50,000, incorporated; B. M. Duncan, 911 Brandon Ave.

Va., Norfolk—Bobbie-Links, Inc., capital \$25,000, incorporated; James Hume, 1029 Spottswood Ave.

Va., Norfolk—Redgate, Inc., capital \$15,000, incorporated; R. P. W. Baylor, Royster Bldg.

Lumber Enterprises

Ark., Pine Bluff—McGehee Realty & Lumber Co., M. H. McGehee, Pres., Fourth and Mulberry St., let contract to Smithwick Construction Co., 2501 W. 25th St., for lumber sheds; 62x100 ft., frame, conc., conc. floors, built-up roof; \$10,000; E. P. Reed, Archt., 915 State St. 5-15

Fla., Watertown — R. L. Montague, Inc., Peoples Bldg., Charleston, S. C., negotiating to acquire lumber mill of East Coast Lumber Co. at Watertown; also includes about 70 mi. railroad, rolling stock, etc.; expend \$20,000 for alterations and repairs.

Mo., Cape Girardeau—E. C. Robinson Lumber Co., St. Louis, acquired Home Builders Lumber Co.

Okla., Medford—Long Bell Lumber Co., R. A. Long Bldg., Kansas City, Mo., rebuilding lumber yard recently burned.

Va., Hampton—Heffelfinger Co., Inc., P. S. Vaughan, Gen. Mgr., advises will rebuild shed, recently burned; move lumber mill; erect several other sheds.

Tex., El Paso—American Lumber Supply Co., capital \$25,000, incorporated; Herbert W. Gehring, Caples Bldg.

Mining

Louisiana — Jefferson Lake Oil Co., 905 New Orleans Bank Bldg., New Orleans, reported, signed contract with American Cyanamid Co., 535 Fifth Ave., New York, for developing sulphur deposits of Lake Peigneur section, Iberia Parish, to begin at early date; calls for erection of plant by American Cyanamid Co., with 150,000 tons yearly capacity, to be enlarged as rapidly as possible to 500,000 tons; sulphur deposits are found at 600 to 900 ft. below surface of Lake Peigneur; Jefferson Lake Oil Co. has 1400 acres under lease. 4-17

La., Shreveport — Gulf States Minerals Corp., capital \$25,000, incorporated; S. R. Elliott, 300 Spring St.

Tenn., Jefferson City—Universal Exploration Co., subsidiary of United States Steel Corp., 71 Broadway, New York, reported, plans erecting second and third unit to concentrating plant as demands necessitate, increasing capacity to 2400 tons raw ore daily; \$500,000 ore reducing mill now being completed. 11-7-20

Miscellaneous Construction

Ala., Birmingham—City, E. M. Owen, Div. Engr., A. J. Hawkins, City Engr., let contract to Walter T. Weaver, 508 McMillan Ave., for constructing retaining wall on Village Creek bank, 732 ft. long, at \$12,767. (See Drainage, Dredging and Irrigation, 5-1.)

Fla., Miami Beach—Office of City Engr. opens bids June 4 for following: 15,120 lin. ft. creosoted timber piles, 6400 lin. ft. untreated timber piles, 50,510 sq. ft. steel sheet piling in bulkhead, 42,280 sq. ft. steel sheet piling in groynes, 2015 lin. ft. channel wale, 256 8x8 in. creosoted timber struts, 4324 lin. ft. 6x10 creosoted timber wales, 2015 lin. ft. 10x12 lin. untreated bearing timber, 11,300 cu. yd. earth fill "Area A," 29,000 cu. yd. earth fill "Area B," 1 connection with existing sea wall, trestle work for 2 groyne extensions.

Fla., Tampa — Tunnel — See Bridges, Culverts, Viaducts.

La., New Orleans—Bd. of Port Commrs. of Port of New Orleans, Samuel Young, Ch. Engr., advises regarding \$1,100,000 Bienville Street Wharf, plans being prepared by Engineering Dept., Bd. of Port Commrs., which board will act as general contractors; this quay wharf will consist of steel substructure on conc. foundation and steel single story shed with conc. floor, shed to be enclosed with sheet metal siding and steel doors, orn. stucco work at upstream end of wharf; call for bids for foundations in about 30 days.

La., Shreveport—City Comsn. Council opens bids May 27 for constructing 1200 ft. dyke right bank Red River; plans and specifications at office of City Engr.

Md., Baltimore—Bd. of Awards has low bid from Mullan Contracting Co., 3946 Greenmount Ave., at \$25,470, for pedestrian underpass, Druid Hill Park; Winfield F. Courts, Park Engr., Druid Hill Park. 5-8

Mo., Kansas City—Farmers' National Grain Corp., C. E. Huff, Pres., Salina, Kans., re-

ported, acquired Hall-Baker Grain Co., including nearly 6,000,000 bu. of elevator space in Kansas City terminal, involving Kansas-Missouri Elevator Co., owned by Missouri Pacific R. R. and Murray Elevator, owned by Chicago, Burlington & Quincy R. R. Co.; will continue under name of Hall-Baker Grain Co.

Mo., St. Louis—City Plan Comsn., Frank E. Lawrence, Jr., Secy., reported, approved expenditure of \$50,000,000 for riverfront improvement and beautification, including double decking Third St. 2-14-29

Okla., Guthrie—See Water Works.

Tex., Brownsville—J. M. Putnam, 2561 W. 20th St., and associates, Oklahoma City, Okla., acquired Neils Esperson Estate and adjoining properties near terminus of Boca Chica Rd.; plans bathing piers and yacht basin in connection with \$1,000,000 pleasure resort. (See Building News Columns—Buildings Proposed—Miscellaneous)

Tex., Houston — Port Comsn. completed foundation for 1 unit and now starting constructing tank walls in connection with \$1,130,000 extension to public grain elevator; following have sub-contracts: All machinery by Webster Mfg. Co., 1856 N. Kostner Ave., car dumper and silent chain drives, Link-Belt Co., 300 W. Pershing Road, both Chicago, Ill.; rein. bars, motors, rubber belts and hardware, Peden Iron & Steel Co., 700 N. San Jacinto St., Houston; cement, Atlas Portland Cement Co., Amicable Bldg., Waco; Lone Star Cement Co., Post-Dispatch Bldg., and Trinity Portland Cement Co., 325 N. York St., both Houston; spouting, Material Handling Equipment Co., 53 W. Jackson Blvd.; Folwell Engineering Co., Gen. Contr., 333 N. Michigan Ave., John S. Metcalf Co., Engr., 111 W. Jackson Blvd., all Chicago, Ill. 4-24

Tex., Houston—Port Comsn., B. C. Allin, Port Director, will receive bids for ½ mi. of track at public grain elevator; \$10,000 to \$12,000. 4-24

Tenn., Nashville—W. M. Dean Marble Co., Columbia, S. C., has contract for \$10,740 memorial in plaza of War Memorial Bldg.

Tex., San Antonio—City, C. M. Chambers, Mayor, voted \$1,000,000 for work on river and on San Pedro and Alazan Creek.

Va., Alleghany—Chesapeake & Ohio Ry. Co., C. W. Johns, Ch. Engr., Richmond, recently let contract to Walton Construction Co., Liberty Trust Bldg., Roanoke, Va., for \$1,150,000 single track tunnel to parallel old Alleghany tunnel; conc. lined with floor slab and ballast walls approx. 4500 ft. long. 5-8

Miscellaneous Enterprises

Ark., McGehee—S. D. Dessert erect bakery, S. Front St.; 1 story, brick, 75x100 ft., include office, store and sheds; install machinery to cost \$20,000; Arkansas Baking Co., C. H. Ahrens, Pres., 501 E. Third St., Pine Bluff, Lessee.

Fla., Daytona Beach—E. L. King, 1235 S. Atlantic Ave., plans experimental plant for cultivating flowers for use in manufacturing aromatic materials; erect nurseries and greenhouses.

Fla., Melbourne—R. H. Berg acquired Melbourne Sentinel.

Fla., Miami—Civic Publishers, Inc., chartered; J. W. Conroy, 2145 S. W. 24th St.

Fla., Tampa—Wengler & Mandell, Inc., 402 S. 22nd St., Tampa, and Chicago, Ill., acquired Sanchez & Haya Co., 2406 17th St., cigar manufacturer; erect large addition or lease additional manufacturing facilities.

Ga., Augusta—Coca-Cola Bottling Co. erecting plant; Jacobson Plastering Corp., Candler Bldg., Atlanta, has contract for lathing and plastering; D. Slusky & Son, Gen. Contr., 1009 Broad St., Augusta.

Ga., Savannah—Lindsay-McMillan Co., 93 S. Water St., Milwaukee, Wis., manufacturer of oil products and chemicals, started rebuilding plant recently burned; building, \$5000; equipment \$20,000; Zeno Le Tellier, Engr., 747 52nd St., Milwaukee, Wis. See Want Section—Machinery and Supplies.

Ky., Dayton, Newport—Perry & Derrick Co., 908 Central Ave., Cincinnati, Ohio, manufacturer of paints, varnishes, etc., let contract to F. H. J. Lampe, Newport, for plant addition; 1 and 2 story, \$45,000 with equipment; E. C. Landberg, Archt., Kentucky Bldg., Newport.

Ky., Lexington—Eureka Screen & Shutter Co., Inc., capital \$100,000, incorporated; John A. Creech, T. W. Jones.

Ky., Louisville—Brown & Williamson Tobacco Co., George Cooper, Pres., 120 S. Liber-

ty St., Winston-Salem, N. C., moving smoking tobacco manufacturing department here.

Ky., Louisville — Cleo Co. of Ohio and Kentucky, recently formed subsidiary of Cleo Co. of America, Tampa, Fla., establish bottling plant here; reported establish plants in 12 cities.

Ky., Maysville—East End Ferry Co., capital \$25,000, incorporated; D. A. Elkins, James Howard.

Ky., Mayfield—Messenger Publishing Co., capital \$88,000, incorporated; Frank O. Evans, George J. Covington.

La., Leesville—Leesville Cooperative Sweet Potato Curing Co., Inc., chartered; M. A. Cavanaugh, Jr.; C. L. Adams.

La., New Orleans—Laundry & Dry Cleaning Service let contract to O. M. Gwin Construction Co., both Union Indemnity Bldg., for alterations to building, Iberville and Exchange Alley; to Rockwood Sprinkler Co. for installing sprinkler system; cost \$16,100.

La., New Orleans—Pelican Cracker Factory let contract to J. A. Petty & Sons, Inc., Godchaux Bldg., for remodeling and altering building, 818 Magazine St.; Sam Stone, Jr., & Co., Archt., Masonic Temple Bldg. 5-1

La., New Orleans — Following, reported, completed arrangements for merger and reorganization: Rossville Commercial Alcohol Corp., Graybar Bldg., New York, with plants here; General Industrial Alcohol Corp., 285 Madison Ave., New York, with plants at Marrero and New Orleans, and American Solvents & Chemical Corp., 122 E. 42nd St., New York, with plants at New Orleans and Harvey.

La., Shreveport—Dickson Ice Cream Co., P. O. Box 1234, denies report that company plans erecting plant; has been planning acquiring property for erection of plant in 3 or 4 years. 5-8

Md., Annapolis—Clathorne-Annapolis Ferry Co. applied to Public Service Comsn., Baltimore, for permission to operate additional ferry services across Chesapeake Bay, Annapolis to Kent Island.

Md., Baltimore—John H. Ferguson, 1918 Harford Ave., will let contract to B. F. Bennett Building Co., 123 S. Howard St., for \$225,000 garment plant, Elm Ave. and 32nd St., Hampden section; 2½ stories, 112x200 ft., brick; to be completed about Oct. 15; English-American Tailoring Co., Lessee, Lafayette Ave. and Dickson St.; Herman F. Doeleman, Engr., 516 N. Charles St. 4-10

Md., Baltimore—Helwig & Leitch Corp., Wilbur R. Leitch, Pres., 1533 Gorsuch Ave., has plans in progress for mayonnaise plant and addition to present building, 1640-1644 Gorsuch Ave.; new building, 3 story and basement, 20x90 ft., brick; remodel building, 28x90 ft., 3 story and basement, brick; replace present equipment with modern machinery; start construction about June 1; Owens & Cisco, Archt., Continental Bldg.

Md., Baltimore—Charles L. Reeder, Const. Engr., announced formation of partnership to be known as Reeder, Elser & Akers, 916 N. Charles St.; consulting engineers.

Md., Stevensville—Bay Bridge Ferry Corp., Aldace Walker, Pres., 2500 Baltimore Trust Bldg., Baltimore, applied to Public Service Comsn., Baltimore, for permission to operate high-speed ferry from Skidmore, on west side of Chesapeake Bay near Sandy Point to Stevensville, Kent Island; also to operate bus lines on Eastern Shore, feeding terminus of proposed ferry service and running from Maryland-Pennsylvania line to Ocean City; also serve Baltimore, Washington and other points on west side of bay.

Miss., Denham Springs—Planters' Packing Corp. soon start erecting \$20,000 vegetable dehydrating plant; D. E. McInnis, Baton Rouge, La., interested.

Miss., Meridian—Lauderdale Dairies, Inc., M. E. West, Pres., Biloxi, opens bids, office of P. J. Krouse, Archt., M. & W. Bldg., May 27 for first unit of milk plant, Fifth St. and 31st Ave.; following estimating: Lockard & Vaughan; L. W. Hancock, 26th Ave.; McArthur & McLemore, M. & W. Bldg. and T. J. Barefield, Jr., all Meridian. 5-15

Mo., Billings—Billings Creamery Co. plans \$25,000, 18-ton ice plant.

Mo., Carthage—Quality Greenhouse Corn., capital \$40,000, incorporated; J. H. Corsault, Hutchinson, Kan.; D. Williams, Topeka, Kan.

Mo., Kansas City—Roscoe Stith Building Co., M. C. O'Neill, Secy., changing name to Stith Land & Timber Co.

Mo., Kansas City — Mid-West Sportsman Publishing Co., capital \$35,000, incorporated; Edmond L. Fear, Andrew B. Weyer.

Mo., St. Louis—Plateless Raisinletter Co., capital \$20,000, incorporated; William P. Robertson, 3616 Albert St.; printing.

Mo., St. Louis—Sauerbrunn Construction Co., Arcade Bldg., increasing capital, \$10,000 to \$60,000.

Mo., St. Joseph—News Corp., Ninth and Edmond St., let contract to E. H. Lawhon Construction Co., 110 N. Ninth St., for extensive remodeling and enlargement to building; extend building 17 2/3 ft. increasing working space in building by 1/3; enlarge pressroom and install Goss, octuple press; install typesetting and casting machinery; started construction; Eckel & Aldrich, Archt., Corby Bldg.

Mo., St. Louis—U. S. Wiping Materials Co., capital \$50,000, incorporated; Jerome Lipshitz, 737 Herman St.

N. C., Albemarle — City Steam Laundry formed by merger of Albemarle Steam Laundry and Stanly Damp Laundry; H. N. Cannon, Pres.; W. E. Ridenhour, V.-Pres.; erect plant and install new equipment.

Okla., Hennesey—American Creamery Co. let contract to Webb & Luther, Enid, for \$30,000 creamery; 1 story, brick; Roy W. Shaw, Archt., Enid.

Okla., Seminole — Tip-Top Laundry has final private plans in progress for laundry addition; 1 and 2 story, brick, tile.

N. C., Lumberton — Lumberton Tobacco Co., Inc., K. M. Biggs, Pres., erecting \$35,000 to \$40,000 redrying plant, with 150,000 lb. daily capacity; metal, brick; W. M. Burney, Gen. Contr.

S. C., Charleston—Carolina Wood Preserving Co., capital \$900,000, incorporated; Grant B. Shipley, Pres., also Pres., Century Wood Preserving Co., Koppers Bldg., Pittsburgh, Pa.; T. J. Thorne, V.-Pres. and Gen. Mgr., also V.-Pres., J. F. Prettyman & Sons, W. Kink St., Charleston; operate Prettyman wood preserving plant.

S. C., Columbia—C. M. Joyce and R. M. Joyce acquired entire equipment and rolling stock of Sunshine Dry Cleaners, 1200 Pendleton St.

Tenn., Knoxville—Knoxville Dairies, Inc., capital \$50,000, incorporated; H. S. Gentry, 411 W. Wells Ave.

Tex., Corpus Christi—George H. Belote Construction Co., capital \$15,000, incorporated; George H. Belote, Liberty Court Apt. 8.

Tex., Denison—Cowden Mfg. Co., 412 W. Eighth St., Kansas City, Mo., garment manufacturer, acquired plants of A. C. Barrow Corp. in Denison, and St. Paul, Minn.

Tex., Fort Worth—Tucker Concrete & Material Co., capital \$50,000, incorporated; Clyde Garrett, 4024 Linden St.; building contracting.

Tex., Laredo—Laredo Coca Cola Bottling Co., capital \$18,000, incorporated; S. N. Johnson, S. T. Phelps.

Tex., Fort Arthur—Rainbow Line, capital \$125,000, incorporated; Leonard L. Abshire, 194 S. Procter St., water transportation and wharf operation.

Tex., Houston—Germalene Chemical Co., 1002 N. San Jacinto St., acquired site, Capitol Ave. and Shepherd St., for future plant site.

Tex., San Antonio—Venice Art Marble Co., Inc., capital \$20,000, incorporated; James Taylor, 822 N. Pine St., manufacture tile, cement, marble and terrazzo.

Tex., Waco—Independent Ice Cream Co., capital \$22,000, incorporated; W. T. Buchanan, 2608 N. 17th St., installing equipment in building, N. Fifth St.

Va., Harrisonburg — Imperial Ice Cream Co. started work on \$50,000 plant.

Va., Lynchburg—C. B. Cones & Co., 18 N. Senate Ave., Indianapolis, Ind., acquired overall plant of Barrow Corp.; double capacity.

Va., Petersburg—Chesterfield Electric & Supply Co., capital \$25,000, chartered; J. C. Sullivan, Richmond; dealers and contractors in electrical equipment.

W. Va., Charleston—United Carbon Co., Union Trust Bldg., erecting \$40,000 testing laboratory; 1 story, 42x50 ft.

W. Va., Moundsville—Pittsburgh Bridge & Iron Works, Fulton Bldg., Pittsburgh, Pa., has contract for 235 tons struc. steel for plant of Fostoria Glass Co.; Carl W. Shimp, Gen. Contr., Hawley Bldg., Wheeling; Lockwood Greene Engineers, Inc., 100 E. 42nd St., New York. 5-15

Motor Bus Lines and Terminals

Fla., Jacksonville—Yellow Cab Co., 126½ W. Bay St., plans operating buses in city.

Kentucky—A. L. Henry, Commr. of Motor Transportation, Frankfort, authorized following: Cannon Ball Cab & Bus Co., Pikeville,

to acquire Blue Ridge Bus Line, Ashland, operating between Ashland and Paintsville; Consolidated Coach Corp., 250 E. Main St., Lexington, to acquire Grand Central Bus Line, Providence, operating between Providence and Madisonville.

La., New Orleans—Jefferson Bus Lines, Inc., chartered; R. J. Barrus, 301 N. Peters St.

Ky., Wheelwright—Cannon Ball Cab & Bus Co., Pikeville, authorized by A. L. Henry, Commr. of Motor Transportation, Frankfort, to operate motor bus lines between Weeksburg and Wheelwright and Millard, to Kentucky-Virginia State line via Mouthcard, Ky.

Md., Salisbury—A. Wooten, Inc., Pier 4 Pratt St., Baltimore, formerly Victor Lynn Transportation Co., applied to Public Service Comsn., Munsey Bldg., Baltimore, for permission to operate motor trucks in several directions from Salisbury, in conjunction with fast freight boat line to 30 Eastern Shore towns.

Md., Stevensville—See Miscellaneous Enterprises.

Mo., Kansas City—High Ball Truck Lines, Inc., capital \$50,000, chartered; Don Purteet, Jefferson City.

Mo., St. Louis—Imperial Bus Lines, Inc., chartered; O. F. Erbs, Natl. Bank of Commerce Bldg.

Mo., St. Louis—Truck Terminal Co., 1210 Spruce St., let contract to Baeveldt & Honig Construction Co., Wainwright Bldg., for terminal, 631-33 S. Broadway; 1 story, 50x100 ft., conc. foundation, comp. roof, steel sash, brick; raze present structures; Edward Lantz, Archt., Wainwright Bldg.

Tex., Houston—Meadowbrook Transportation Co. plans bus line from Meadowbrook Addition, Galveston Rd., via Galveston Road, to connect with Harrisburg bus at Galveston Rd. and Broadway; recommendation that permit be granted filed with Fred W. Turner, City Secy., by George H. Pruter, City Business Mgr.

Tex., Huntsville—Arrow Motor Freight Lines, Inc., Geo. C. Morris, Mgr., 12th and L Sts., Box 638, recently formed, will purchase and operate following Class A motor freight franchises under regulation of Railroad Comsn., Austin, as follows: Day's Motor Freight, Dean & Dickey Truck Line and S. B. Smith Truck Line, operating Houston to Huntsville; Madisonville-Houston Truck Line, operating Houston to Madisonville; H. C. Brunson Truck Line, operating Houston to Groveton; Cook & Arrington Truck Line, operating Houston to Palestine; plans purchasing freight trucks later in season of 2 to 3-ton capacity; construction under way on Houston and Huntsville terminals; materials arranged for.

Tex., San Angelo—W. T. Morrow, Thomas P. Cheney and Wallace England, all Albuquerque, N. M., applied for permission to operate buses in city.

Railways

Md., Baltimore—Baltimore & Ohio R. R., W. S. Galloway, Pur. Agt., ordered 4 locomotives from Baldwin Locomotive Works, Philadelphia, Pa.; 2 Mikado, 2 Mallet.

Mo., St. Louis—St. Louis-San Francisco Ry., B. T. Wood, V.-Pres. and Ch. Pur. Officer, will start at once constructing 230 automobile cars at north shops, Springfield, Mo.; trucks of automobile cars on hand will be used in work.

Mo., St. Louis—Alton & Southern R. R., J. S. Murray, Pur. Agt., Pittsburgh, Pa., will purchase 1 or 2 switch engines.

Okla., Hough—Beaver Meade & Englewood R. R. Co., C. J. Turpin, V.-Pres. and Gen. Mgr., Insurance Bldg., Oklahoma City, opens bids May 28 for constructing about 40 mi. of railroad from Hough in westerly direction; contract to be let for entire distance or 1 or more sections of 10 mi. each.

Va., Winchester—Winchester & Wardsville Railroad recently formed, authorized by Interstate Commerce Comsn., Washington, to issue necessary securities and carry out plans of reorganizing Winchester & Western R. R., D. H. Sencindiver, Receiver and Gen. Mgr., Winchester, operating in Virginia and West Virginia; new firm will acquire line in exchange for \$136,000 in common stock and \$662,000 in mortgage bonds.

Railway Shops and Terminals

Tex., Toyah—Texas & Pacific Ry. Co., E. F. Mitchell, Ch. Engr., Dallas, advises let contract to Panhandle Construction Co., Lubbock, for water pipe line, Toyah to Big Agua

Canyon in Davis Mountains; combination 12, 10 and 8-in. line, 37½ mi. long; serve railroad and city; railway furnishing all materials.

Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

Proposed Construction

Arkansas—State Highway Comsn., Little Rock, received low bids for 23 roads and 8 bridges and approaches, totaling about \$2,300,000: Monroe County—10 mi. grading, draining, State Highway No. 70, DeWalls Bluff-Wheatley road, Williams & Williams, Batesville, \$65,445; St. Francis County—12 mi. grading, draining, State Highway No. 70, Wheatley-Forrest City road, Yellville Construction Co., Yellville, \$71,620; Crittenden County—1¼ mi. conc., Highway No. 70, Forrest City-West Memphis road, Grady Garms, Rector Bldg., Little Rock, \$14,176; Nevada County—7 mi. grading, draining, and 105 ft. conc. bridges, Highway No. 67, Prescott-Little Missouri River road, Britt & DeLaughter, Broughton, Ark., \$43,220; Clark County—2 mi. grading, draining, Highway No. 67, Prescott-Gurdon road, J. S. Young, Texarkana, \$39,500; Polk County—12½ mi. crushed stone surface, Highway No. 8, Mena-Howard road, Arkansas Forest project, T. L. Thogmartin & Sons, Little Rock, \$27,794; Lonoke County—12½ mi. grading, draining, Highway No. 30, Scott-England road, S. E. Evans, 1400 N. 18th St., Fort Smith, \$45,767.

In Johnson County—6 mi. Highway No. 64, Ozark-Clarksburg road, Garrett Construction Co., 211½ E. Commercial St., Springfield, Mo., \$120,674; Lawrence County—6 mi. conc., Highway No. 67, Hoxie-Allecia road, Porter Construction Co., Lewis St. and Frisco R. R., Tulsa, Okla., \$87,382; Cross County—10 mi. asphaltic retread, Highway No. 16, Fair Oaks-Wynne road, T. L. Thogmartin & Sons, \$31,413; Jefferson County—5 mi. asphaltic retread, Highway No. 3, Pine Bluff-Altheimer road, T. L. Thogmartin & Sons, \$16,246; Pike County—4½ mi. gravel surface, Highway No. 8, Amity-Glenwood road, A. C. Kennedy, Little Rock, \$5084; Montgomery County—9½ mi. gravel surface, Highway No. 6, Brushy Creek-Ouachita River road, Newell Contracting Co., 320 W. Markham St., Little Rock, \$996; Washington County—11½ mi. crushed stone surface, Highway No. 45, Fayetteville-Prairie Grove road, T. L. Thogmartin & Sons, \$20,556; Jackson County—1½ mi. grading, draining, gravel surfacing and 284 lin. ft. bridge on Newport-Village Creek road, Highway No. 17, Bunnell & Mack, Paragould, \$17,921.

In Stone County—19¼ mi. gravel surface, Highway No. 14, Mountain View-Independence County line road, T. L. Thogmartin & Sons, \$24,695; Cleburne County—4½ mi. crushed stone surface, Highway No. 16, Edgemont-Van Buren County line road, M. B. Lefler, Clinton; Jackson County—6 mi. gravel, Highway No. 67, Tuckerman-Newport road, Schultz Construction Co., Paris, \$6693; Pulaski County—12½ mi. grading, draining, North Little Rock-Faulkner County line road, B. F. Brooks Co., Love Field, Dallas, Tex., \$115,855; Garland County—5 mi. asphaltic retread, Hot Springs-Glenwood road, Highway No. 70, T. L. Thogmartin & Sons, \$18,067; Pulaski County—7½ mi. grading, draining, Highway No. 10, Little Rock-Perryville road, J. P. McNulty, Pine Bluff, \$23,274; Van Buren County—6 mi. crushed stone surface, Highway No. 16, Shirley-Edgemont road, Taylor & Taylor, Clarksville, \$5649; 227 lin. ft. bridge over Weaver Creek and 673 lin. ft. earth approaches, J. B. Torbett, Rogers, \$10,853.

In Baxter County—6 mi. gravel, Highway No. 5, Mountain Home-Calico Rock road, Yellville Construction Co.; Union and Ashley Counties—1335 lin. ft. rein. conc. bridge in Ouachita River bottoms on Strong-Crosssett road, Highway No. 2, Gauger-Korsmo Co., Fidelity Bank Bldg., Memphis, \$117,853; Calhoun County—878 lin. ft. conc. bridge over Ouachita River and bottoms of Hampton-Callion road, State Highway No. 115, Peterson & Earnhart, Montgomery, \$57,034; Drew County—549 lin. ft. timber and steel bridges and 951 lin. ft. earth embankment approaches, Monticello-Tillar road, J. W. Covington, Benton, \$20,425; Yell County—563 lin. ft. conc. bridges and 837 lin. ft. earth embankment approaches, Havana-West road, Highway No. 10, M. H. Franks Construction Co., Leslie, \$51,799; Clark County—752 lin. ft. bridges over Caddo River and bottoms on Hot Springs-Arkadelphia road, Highway No. 51, F. A. Gehrig & Co., Arkadelphia, \$46,692; Monroe County—steel and conc. bridge on

Highway No. 3, Clarendon, Austin Bridge Co., 1813 Clarence St., Dallas, \$1,532,572; C. S. Christian, State Highway Engr.

Ark., Camden—Commrs. of Street Improvement Dist. No. 12, Leo Berg, Chmn., plans receiving bids about June 1 for 14,000 sq. yd. grading, draining, paving, curb and gutter, on S. Main St. and Breckenridge Ave.; estimated cost \$40,000; J. W. Haynes, Engr.

Ark., Russellville—Pope County plans highway from Hector to Okay, work to begin not later than July; building in forest reserve, under supervision of H. R. Koen, Forest Supvr.; J. Q. Hill, Judge.

Ark., Russellville—City plans receiving bids soon to pave West Main St.

Florida—State Road Comsn., Tallahassee, receives bids June 6 for improving 4 roads and 12 bridges: Bay and Jackson Counties—29.43 mi. 8-in. compacted Florida lime rock base, Road No. 20, Bayou George to pavement in Jackson County; Gilchrist and Alachua Counties—12.26 mi. Road No. 14, Trenton to Newberry; Lee County—1.89 mi. curb, gutter and sidewalk on approaches to Caloosahatchee Bridge; Collier County—10.55 mi. seal coat single bit. treatment, Road No. 27, point north of Naples to Lee County line; Palm Beach County—3 crescented timber bridges, Road No. 143; One 6-15-ft. spans; two 2-15-ft. spans; Bay County—three timber bridge, 45 ft. long; 5 timber bridges totaling 555 ft. in length; one 60-ft. timber bridge, all on Road No. 10; B. M. Duncan, State Highway Engr.

Fla., Miami Beach—City, C. W. Tomlinson, Clerk, receives bids June 4 for roads in Districts H-111 and H-112; 5,500 square yards 10-in. rock base, 2,000 lin. ft. conc. curb and gutter, 5,500 sq. yd. sand or broken slag or stone chip cover, 1,100 gal. cold oil, 2,200 gals. hot oil, etc.; E. N. Neff, City Engr.

Fla., Pensacola—State Road Dept., Tallahassee, making survey for State Road No. 62, from Century, Escambia County, to Milligan, Okaloosa County; E. K. Fogg, Dist. Highway Engr.

Fla., Stuart—Martin County Commrs. plan widening road 9 to 16 ft. between old and new Dixie Highway at Hobe Sound; F. A. Stafford, County Engr.

Ga., Savannah—Chatham County Commrs. considering paving Wilmington Island road, from intersection with Tybee road to south end of island.

Georgia—State Highway Comsn., Atlanta, plans grading this year, Highway No. 129, from Athens to Macon; will pave in 1931; B. P. McWhorter, State Highway Engr.

Louisiana—Louisiana Highway Comsn., Baton Rouge, receives bids May 27 to furnish gravel and build 5 mi. Archie-Center Point Highway, Catahoula and LaSalle Parishes; H. B. Henderlite, State Highway Engr.

Louisiana—Louisiana Highway Comsn., Baton Rouge, received low bids for 13 roads and 2 bridges: Acadia-Lafayette Parishes—11.8 mi. conc., Crowley-Duson Highway, McGuire & Cavender, Texarkana, Tex., \$320,154; Calcasieu Parish—8.3 mi. conc., Lake Charles-Texas Line road, Lawrence Construction Co., Lamar Bldg., Jackson, Miss., \$223,668; Jefferson Parish—2.1 and 1.08 mi. conc. in Gretna, Inglis Construction Co., Hammond, \$97,887; Lafourche Parish—5.3 mi. conc., Raceland-East and West Highway, Barber Bros. Construction Co., Bogalusa, \$128,340; Rapides Parish—11 mi. conc. Moreland-Meeker Highway, W. R. Aldrich & Co., Dyersburg, Tenn., \$286,851; St. Mary Parish—7.6 mi. conc. Morgan City-Bayou Boeuf Highway, Noonan Construction Co., E. Lloyd St., Pensacola, Fla., \$241,023; Terrebonne Parish—15 mi. conc., Humphreys-Lake Bridge Highway, Southern Paving Construction Co., Volunteer Life Bldg., Chattanooga, Tenn., \$378,427; Natchitoches Parish—11.8 mi. conc., Luella-Campiti road, Forcum-James Co., Dyersburg, Tenn., \$328,191; Madison Parish—7.1 i. conc., Mound Delta Highway, A. C. Campbell, Winnfield, \$162,420; Evangeline Parish—4.1 mi. conc., Ville Platte Highway, Barber Bros. Construction Co., \$93,591; Avoyelles and Rapides Parishes—9.7 mi. grading, gravel, Archie-Marksville Highway, Alexandria Construction Co., Alexandria, \$126,038; Caldwell Parish—4.1 mi. grading, gravel, Columbia-Winneshore Highway, H. E. Machen, Winnfield, \$47,421; Richland Parish—bridges on Rayville-Delta Highway, Austin Bridge Co., 1813 Clarence St., Dallas, Tex., \$82,515; Rapides Parish—Bayou Jean de Jean Bridge, and 3 mi. approaches, Boyce-Zimmerman Highway, Austin Bridge Co., \$22,354; H. B. Henderlite, State Highway Engr.

Mo., St. Louis—City, Bd. of Public Service, receives bids June 10 for rebuilding streets, and rebuilding and improving alleys; W. W. Jorner, City Engr.

La., Gibsland—Louisiana Highway Comsn., Baton Rouge, making survey to pave portion of South Main and South Second St., along which Dixie Highway passes through business section of town; probably start grading this week; H. B. Henderlite, State Highway Engr.

Maryland—State Roads Comsn., Baltimore, received low bids for 5 roads: Baltimore City—1.21 mi. sheet asphalt, Caton Ave., Wilkens Ave. to Washington Blvd., Baltimore Asphalt Block & Tile Co., 1320 N. Monroe St., Baltimore, \$105,378; Dorchester County—1 mi. conc., Finchville-Reliance road, end of Cont. No. D-48 toward Reliance, P. D. Phillips & Bro., Salisbury, \$16,314; Frederick County—1.92 mi. conc., Johnsonville-Union Bridge road, end of Cont. F-99 to conc. near Union Bridge, Southern Maryland Construction Co., 14 E. Lexington St., Baltimore, \$51,153; Queen Anne's County—1.54 mi. conc., Centerville-Wye Mills road toward Starr, P. D. Phillips & Bro., \$25,793; St. Mary's County—1.05 mi. gravel, from end of Cont. SM-42 at Hermanville, south, Pembroke & Gasparovic, Park Hall, \$7661; G. Clinton Uhl, Chmn. 5-8

Maryland—State Roads Comsn., Baltimore, receives bids May 27 for 6 roads: Baltimore City—1.1 mi. sheet asphalt, Cold Spring Lane, Falls road to Green Spring Ave., Cont. BC-90-74; Carroll County—1 mi. macad., Day toward Winfield, Cont. C1-82-54; Charles County—1 mi. gravel, end of Cont. CH-68 south of Faulkner to Pope's Creek, Cont. Ch-81-84; 1.19 mi. gravel, end of Cont. Ch-69 near Pomfret to Pomonkey, Cont. Ch-82-82; St. Mary's County—1 mi. gravel, end of Cont. SM-50, south of Hollywood toward California, Cont. SM-62-84; Worcester County—1.6 mi. conc., from Friendship to Berlin-Ocean City road, Cont. Wo-72-12; G. Clinton Uhl, Chmn.

Md., Baltimore—City, Wm. F. Broening, Mayor, considering widening Lexington St. from Aisquith St. southwesterly; opening and widening Fayette St., Caroline to Broadway, and Lexington St., Caroline to Bond St.; plans connection of Lexington and Fayette St. between Broadway and Caroline, through creation of small triangle; Nathan L. Smith, Highways Engr.; Chas. F. Goob, Ch. Engr.

Md., Baltimore—City, Bd. of Awards, received low bid from Arundel Construction Co., 908 Trinity St., \$21,889, to grade, curb and pave 6 streets in Cont. No. 553; 10,000 sq. yd. conc.; Nathan L. Smith, Highways Engr. 5-8

Miss., Hazlehurst—City, Mayor and Bd. of Aldermen, receive bids June 3 for paving, curb, gutter and storm sewers on various streets, Projects No. 14, 16 and 17; 8,950 sq. yd. paving; 3,100 cu. yd. grading; 6,500 lin. ft. curb and gutter; Culley O'Brien Engineering, Inc., 301 Standard Life Bldg., Jackson.

Miss., McComb — City, X. A. Kramer, Mayor, receives bids June 3 for grading and 5,445 sq. yd. one and two course conc. sidewalk paving; 9,900 lin. ft. straight curb and gutter; 8,300 cu. yd. excavation; Henry A. Mentz & Co., Engrs., Hammond, La., or McComb.

Missouri—State Highway Comsn., Jefferson City, receives bids May 27 for 45 roads and 15 bridges: DeKalb County—2,582, 2,596, 4,787, 214 mi. 9-ft. conc. Route 26 to Oak, 45,994 cu. yd. excavation, 54,767 sq. yd. paving; 3,224 mi. 14-ft. crushed stone, Maysville-Fairport road, 9531 cu. yd. excavation; 1,011 mi. 14-ft. crushed stone, Route 36-Osborn, 1178 cu. yd. excavation; Gentry County—4,561 mi. 18-ft. gravel, King City-west, 5891 cu. yd. paving; Harrison County—4,462 and 4,462 mi. 10-ft. conc., Iowa Line-Eagleville road, 13,386 cu. yd. excavation, 52,552 sq. yd. paving; Holt County—3,213 mi. 18-ft. gravel, Mound City-Bigelow road, 3863 cu. yd. paving; Adair County—1,686 and 4,558 mi. 18-ft. gravel, Novinger-Kirksville, 7892 cu. yd. excavation; Grundy County—2,948 mi. 16-ft. crushed stone, Edinburg-Brimson road, 13,210 cu. yd. excavation, 2628 cu. yd. paving.

In Randolph County—800 mi. 24-ft. graded earth, Moberly-Higbee, 15,605 mi. cu. yd. excavation, bridge over Sweet Springs Creek; Schuyler County—3,481 and 3,485 mi. 18-ft. gravel, Putnam County-Glenwood, 8706 cu. yd. paving; Sullivan County—2,785, 2,741 and 1,853 mi. 18-ft. gravel, Milan south, 9290 cu. yd. paving; Carroll County—1,921 mi. 30-ft. graded earth, Carrollton-east, 79,446 cu. yd. excavation; bridges over Sandy Branch and over slough, double box and deck girders; Ray County—949 mi. 9-ft. conc., Hardin-east, 91,400 cu. yd. excavation, 4773 sq. yd. paving; Saline County—1,820 and 346

mi. 18-ft. gravel, Arrow Rock-Cooper County, and Arrow Rock connection, 20,102 cu. yd. excavation; Crawford County—2,229 mi. 18-ft. gravel, Steelville-Berryman road, 66,972 cu. yd. excavation, 426,580 lb. struct. steel; bridges over branch and over Courtois Creek; Perry County—3,653 mi. 16-ft. gravel Uniontown-Altenburg, 21,530 cu. yd. excavation, 3515 cu. yd. paving.

In Barton County—4,640 mi. 16-ft. chat, Irwin-Milford road, 18,226 cu. yd. excavation, 4371 cu. yd. paving; Bates County—3,452 and 2,671 mi. 16-ft. gravel, Rich Hill-Hume road, 33,659 cu. yd. excavation, 5767 cu. yd. paving; Jasper County—1,212 mi. 20-ft. conc. Route 71 east to Route 66, 15,105 cu. yd. excavation, 15,471 sq. yd. paving; Lawrence County—3,151 and 4,296 mi. 18-ft. crushed stone, Mt. Vernon-east, 75,354 cu. yd. excavation, 5985 cu. yd. paving; bridges over Williams Creek and Dry Branch; McDonald County—3,332 mi. 16-ft. gravel, Anderson-Rocky Comfort road; Vernon County—4,792 mi. 16-ft. chat, Route 54-Moundville, 16,163 cu. yd. excavation; 2,517 mi. 16-ft. chat, Route 54-Waler, 4695 cu. yd. excavation; Greene County—4,943 mi. 18-ft. crushed stone Route 12-Walnut Grove, 30,792 cu. yd. excavation, 6209 cu. yd. paving; 4,764 mi. 18-ft. gravel, Route 12-Walnut Grove, 30,127 cu. yd. excavation, 5984 cu. yd. paving.

In Phelps County—1,850 mi. 18-ft. gravel, Newburg Spur, 20,924 cu. yd. excavation; bridges over branches, double box; Pulaski County—2,927 mi. 18-ft. gravel, Richland-Route 66, 13,398 cu. yd. excavation; Carter County—4,157 mi. 24-ft. graded earth, Ellinsore-Wayne County, 18,982 cu. yd. excavation; bridge over branch; Shannon County—1,701 and 3,482 mi. 18-ft. gravel, Montier-Birch Tree, 6509 cu. yd. paving; Cape Girardeau County—1,426 mi. 18-ft. gravel, Bloomer-Chaffee, 23,629 cu. yd. excavation; Scott County—2,562 mi. 18-ft. gravel, Bloomer-Chaffee, 55,192 cu. yd. excavation, bridges over drainage ditch and over creek; Mississippi County—1,838 mi. 12-ft. gravel, Refund 1-Dorema, 6650 cu. yd. excavation; Wayne County—617 mi. 18-ft. gravel, Greenville-Taskee road, 29,840 cu. yd. excavation, bridge on 209 mi. Greenville-Taskee road, over St. Francis River, deck girders and truss; T. H. Cutler, Ch. Engr.

Miss., New Albany—Town, Mayor and Bd. of Aldermen, receive bids May 26 to improve certain streets; Robert L. Totten, Inc., Conslt. Engr., Birmingham, Ala.

Miss., Grenada — Grenada County Bd. of Supvrs. receives bids June 3 for .824 mi. road as part of state trunk road between Grenada and Memphis, 20,823 cu. yd. borrow excavation; also bridges, 233,670 lb. rein. steel, 5,292 lin. ft. foundation piling; G. A. Draper, State Highway Engr., Jackson.

Mo., Bonne Terre—City plans expending \$10,000 for grading, paving, curbing, gutter on W. School St.; Chas. A. Haskins, Engr., 824 Finance Bldg., Kansas City.

Mo., Clayton—St. Louis County Court plans letting contract about August 1 for 5 mi. 20-ft. wide conc. slab paving, Page Blvd., from Pennsylvania Ave. to new State Highway No. 77; Roy Jablonsky, Highway Engr.

Mo., Clayton—St. Louis County plans 20-ft. slab on Ballas road, from Manchester road to Missouri Pacific R. R. branch tracks about 1/4 mi. north of Olive St. road and connecting road to point 1/4 mi. north of Olive St. road; Roy Jablonsky, Highway Engr.

Mo., St. Louis—City, Bd. of Public Service, receives bids June 3 for 17,875 sq. yd. asphalt paving Carroll St., Blair, Clemens and Missouri Ave.; 1955 sq. yd. asphaltic conc., Switzer Ave.; 4180 sq. yd. Warrenite bitulithic, Compton Ave.; 8275 sq. yd. bit. conc., Hornsby Ave. and Chippewa St.; total cost \$207,240; W. W. Horner, City Engr.

Mo., Triplett—Triplett Township, Chariton County, plans expending \$70,000 for graveling system farm-to-market roads in township. See Financial News Columns.

N. C., Charlotte—City, R. W. Rigby, Mgr., received low bid from Kiker & Yount, Reidsville, at \$8,550, for resurfacing.

N. C., Concord—City, Bd. of Aldermen, plans expending \$20,000 for street paving. See Financial News Columns.

Oklahoma—State Highway Comsn., Oklahoma City, receives bids June 2 for 6.18 mi. grading, draining, State Highway No. 11, Rogers and Wagoner Counties; 4.6 mi. grading, draining, U. S. Highway No. 64, Yahola Corner through Boynton to Haskell, Muskogee County; receives bids June 9 for 12 mi. grading, draining, State Highway No. 16, Collinsville to Oologah, Tulsa and Rogers

Counties; bids June 16 for bridges on same highway between same towns; also receives bids in June for 16 mi. standard grading, draining, State Highway No. 7, Kiowa and Comanche Counties, and bridges, all east from Snyder; grade and drain 16 mi. U. S. Highway No. 64 between Alva and Cherokee, Alfalfa and Woods Counties; 16 mi. grade, drain State Highway No. 8, Watonga to Geary, Blaine County; plans soon grading and draining Highway No. 11, Tulsa to Choctaw; A. R. Losh, State Highway Engr.

Okla., Oklahoma City—City, E. M. Fry, Mgr., considering resurfacing Harvey Ave., Reno Ave. to Second St., and Grand Ave. from Santa Fe Ave. to Frisco tracks; preparing plans to pave Twenty-third St., May Ave. to Grand Blvd., and from Villa to May Ave.; W. W. Small, City Engr.

Oklahoma—State Highway Comsn., Oklahoma City, received low bid from Standard Paving Co., 2119 E. Eleventh St., at \$32,777 for .737 mi. grading, draining, State Highway No. 11 in bottom land adjoining Verdigris River, Wagoner and Rogers Counties. 5-15

Okla., Bartlesville — City plans 8 blocks paving; J. E. McCormick, City Engr.

S. C., Gaffney — State Highway Comsn., Columbia, plans hard surfacing highway between Gaffney and Blacksburg and building bridge over Broad River near present bridge, Cherokee County; Charles H. Moorefield, Ch. Highway Engr.

Tenn., Chattanooga—City, Roger Crox, Commr., considering widening Rossville Ave. and South Broad (Whiteside St.); W. H. Wilson, City Engr.

Tenn., Shelbyville—City plans expending \$50,000 for street improvement. See Financial News Columns.

Tenn., Chattanooga — City, Roger Crox, Commr., receives bids soon for street paving and sidewalks on Cherry St.

Tenn., Memphis—City, D. C. Miller, Clk., plans expending \$400,000 for street improvement, including widening and improving Vance Ave. and Madison St.; repaving South Main St.; will sell bonds; William B. Fowler, City Engr. 5-1

Tex., Athens—Henderson County, A. B. Coker, Judge, plans 3.715 mi. grading, draining, Highway No. 49, from point west of Poynor to Henderson County line; S. J. Treadway, Res. Engr.

Tex., Bryan—Brazos County, A. S. McSwain, Judge, plans 2.128 mi. grading, draining, conc., Highway No. 90, Navasota River to Brazos River; C. C. Todd, Res. Engr.

Tex., Crowell—Foard County, J. E. Atkinson, Judge, plans 4.943 mi. rein. conc., Highway No. 28, Crowell to Sta. 261 plus 00; Byron Reese, Res. Engr.

Tex., Dallas—Dallas County Commrs. Court, Chas. E. Gross, County Auditor, receives bids June 9 to grade and pave 2 sections Mocking Bird Lane; From Richardson road to White Rock Lake; from Richardson to Airline road; Rollins & Clinger, Dist. Engrs.

Tex., Haskell — Haskell County, Joe A. Jones, Judge, plans 14.479 mi. grading, draining, Highway No. 30, from Jones County line to Haskell County line; J. W. Puckett, Res. Engr.

Tex., Houston — City, W. E. Monteith, Mayor, received low bids from Brown & Root, Norwood Bldg., Austin, at \$22,451, to pave Chartres St., Canal to Preston; at \$21,527 to pave Bissonette St., from Green Briar Dr. to Kirby Dr.; G. L. Fugate, Acting City Engr. 5-8

Tex., Houston—City Council, W. E. Monteith, Mayor, considering paving Jefferson Ave., Smith to Crawford St., 52 ft. wide; probably pave with inverted penetration Mandell St., Westheimer road to Richmond road; G. L. Fugate, Act. City Engr.

Tex., Greenville — Hunt County, T. J. O'Neal, Judge, plans 2.511 mi. grading, draining, Highway No. 1, end of Federal Aid Project No. 271 to Greenville, estimated cost \$42,400; A. J. Goods, Res. Engr.

Tex., Lockhart—Caldwell County, M. O. Flowers, Judge, plans 3.873 mi. grading, draining, Highway No. 29, from point north of Luling to Highway No. 3-A, Luling, and from point southeast of Luling, Highway No. 3-A, to Gonzales County line; Don L. Hook, Res. Engr., Fentress.

Tex., Marshall—City, P. M. Herndon, Sec., receives bids June 2 to pave certain streets:

94,736 sq. yd. excavation, 10,000 lb. rein. steel, 38,622 lin. ft. conc. curb and gutter, 38,622 lin. ft. conc. curb only, 84,016 sq. yd. paving; W. C. Albright, City Engr.

Tex., Madisonville—Madison County, W. L. Robinson, Judge, plans 6.328 mi. grading, draining, Highway No. 21, Sta. 650 plus 22 to Sta. 1001 plus 25; cost about \$50,000; A. McCormick, Res. Engr.

Tex., Nacogdoches—City, R. C. Monk, Sec., plans expending \$50,000 for street paving. See Financial News Columns.

Tex., Rio Grande—Starr County plans expending \$160,000 to improve road system, connecting Rio Grande with farming and ranching regions, north and south of Rio Grande. See Financial News Columns.

Tex., San Antonio—City, C. M. Chambers, Mayor, plans expending \$175,000 to widen, open and extend various streets; \$1,000,000 for street paving; I. Ewig, City Engr. See Financial News Columns. 4-10

Tex., Sherman—Grayson County, A. S. Noble, Judge, plans 12,002 mi. rein. conc., Highway No. 91, from Denison to Red River, estimated cost \$313,000; W. D. Dockery, Res. Engr.

Tex., Uvalde—City plans expending \$25,000 for street improvement. See Financial News Columns.

Tex., Woodville—Tyler County, J. E. Sturrock, County Judge, plans expending \$300,000 for roads in Dist. No. 2. See Financial News Columns. 4-3

Virginia—State Highway Comsn., Richmond, received low bids for 2 roads and 2 bridges: Essex County—4.438 mi. grading, draining, Route 38, Middlesex County line to Center Cross, Virginia Engineering Co., Inc., 322 28th St., Newport News, \$19,719; Fairfax County—1.259 mi. conc., Route 31, at Gum Springs and Snake Hill, Jarboe & Houghton, Mechanicsville, Md., \$46,998; Scott County—247-ft. bridge over North Fork, Holston River, Hilton, Route 10, steel beam spans and through steel truss, Roanoke Iron & Bridge Works, Inc., Walnut Ave., S. E., Roanoke, \$23,261; 42-ft. bridge over Robert's Creek, Hilton, Route 10, 40-ft. rein. conc. beam span, M. S. Hudgins, 23 Second St., South Roanoke, \$5497; C. S. Mullen, State Highway Engr. 5-1

Virginia—State Highway Comsn., Richmond, receives bids June 5 for 6 roads and 2 bridges: Culpeper County—6 mi. grade, drain, Route 32, Remington, south, 10,659 cu. yd. excavation; Bland County—9.3 mi. macad., Route 26, Big Walker Mountain to point north of Bland, 8,000 cu. yd. excavation, 102,480 sq. yd. macad.; Giles County—3 mi. macad., Route 23, Narrows to Rich Creek, 3,000 cu. yd. excavation, 31,000 sq. yd. macad.; Halifax County—6.3 mi. soil, Route 44, point east of Route 18 to Halifax County line, 107,759 cu. yd. excavation, 19,664 lb. rein. steel, 20,663 cu. yd. soil; Chesterfield County—87 mi. soil, Route 13, 9,557 cu. yd. excavation, 2,906 cu. yd. soil; Rockbridge County—10 mi. grade, drain, Route 17, Craigsville to Goshen, 180,000 cu. yd. excavation, 49,583 lb. rein. steel; bridge over Ramseys Draft, 14,025 lb. rein. steel; Wythe County—770-ft. bridge over New River, Route 15, at Jackson's Ferry, three 120-ft. truss spans, one 400-ft. cantilever, 103,105 lb. rein. steel, 885,000 lb. struct. steel; C. S. Mullen, Ch. Engr.

Va., Hopewell—City, Roy S. Braden, Mgr., considering graveling Maplewood Ave. and laying sidewalks on various streets.

Va., Lynchburg—City, R. W. B. Hart, Mgr., plans paving Main St. with brick, from Fourth to Sixth St.; cost about \$16,000.

Va., Norfolk—City, I. Walke Truxton, Mgr., plans expending \$7,900 to pave with slag Thirty-ninth St., Parker Ave. to Hampton Blvd.; \$7,470 for 2 blocks Maryland Ave.; \$9,512 for 2 blocks on Georgia Ave.

West Virginia—State Road Comsn., Charleston, received low bids for 17 roads, 4 culverts and 3 bridges:

Raleigh County—16.8 mi. Harper-Dameron road, R. B. Tyler Co., 1446 Levering St., Louisville, Ky., \$24,620; Wayne County—11.1 mi. Mingo County line-Bull Creek road, Southern Oil & Tar Co., Clay St. and River Road, Louisville, \$21,335; 62.2 mi. Routes 8, 24 and 75, Southern Asphalt Co., North Blvd. and Ellen Road, Richmond, Va., \$14,224; Hardy County—9.4 mi. grading, draining, Baker-Lost River road, J. J. Battershill & Sons, Lewisburg, \$118,596; Lewis County—6.8 mi. cement conc. Walkersville-Braxton County line road, Fucy Bros., Weston, \$174,498; Lincoln County—6 mi. grading, draining, Yawkey-Alum Creek road, J. M. Cain & Co., Huntington, \$163,390.

In Morgan County—8.5 mi. modified bit. macad., Great Cacapon-Largest road, Sam E.

Finley, 292 North Ave., N. W., Atlanta, Ga., \$207,420, for asphalt; Wetzel County—4.6 mi. cement conc., Paden City-New Martinsville road, Ferguson Bros., Shinnston, \$114,122; Barbour County—1.2 mi. grading, draining, Philippi-Clarksburg road, A. Pettito, Mount Clare, \$23,753; Boone County—11 mi. gravel surface, Danville-Woodville road, Geo. N. and O. J. Yoho, Cameron, \$36,950; 3 mi. grading, draining, Whitesville-Coal River road, Ciccarello and Lagraderini, Charleston, \$10,248; Clay County—10.6 mi. cement conc., Kanawha County line-Two Run road, Ferguson Bros., \$314,990; Grant County—4.5 mi. widening, grading and rebuilding, Northwest Turnpike, including Gorman Bridge approach, Murphy Construction Co., Morgantown, \$31,255; Grant County—3 mi. cement conc., street paving, Petersburg, Hambleton Construction Co., Hambleton, \$12,608.

In Greenbrier County—4 mi. widening base and retreat surface, White Sulphur Springs road, Pocahontas Construction Co., \$5803; 6 mi. grading, draining, North Caldwell-White Sulphur Springs road, Brown, Murphy & Wright, Princeton, \$113,675, asphalt; Hampshire County—10.8 mi. grading, draining, shale surfacing, Woodrow-Slansville road, Marrara and Albright, Kingwood, \$160,486; Hardy County—Dumpling Run culvert, two 20-ft. conc. spans, Gilbert Construction Co., Fairview, \$7028; Grant County—3 culverts, Hambleton Construction Co., \$13,947; unofficial low bids on following: Raleigh County—Glen Hedrick Bridge, Dennison & Ritter, Bristol, Va., \$10,000; Raleigh Bridge No. 1217, substructure, A. B. Peraldo & Son, Iaeger, \$5989; superstructure, Vincennes Bridge Co., Vincennes, Ind., \$6857; Boone County—Horse Creek bridge, substructure, Nelson & Copley, Madison, \$5118; superstructure, Vincennes Bridge Co., \$5175. 4-24

West Virginia—State Road Comsn., Charleston, receives bids June 17 for 9 roads and bridge, Fayette County—2.7 mi. grading, draining, U. S. Highway 19-21, Glen Jean to Mt. Hope, Hampshire County—8.9 mi. grading, shale surfacing, State Route No. 9A, Slansville to Northwestern turnpike, Marion County—2.4 mi. grading, draining, U. S. Highway No. 250, Fairmont to Conway Bridge, McDowell County—12 mi. cold tar surface treatment, State Route No. 8, Roderfield to Wyoming County line; Ohio County—1.7 mi. State Route No. 91, Bethlehem to Elm Grove, McDowell County—1.2 mi. State Route No. 8, Bottom Creek to Kimball; Randolph County—3.9 mi. grading, gravel surfacing, State Route No. 5, Harmon to Pendleton; 7 mi. grading, draining, State Route No. 5, Mable to Upshur County line; Upshur County—6 mi. grading, draining, Route No. 5, Buckhannon to Randolph County line; Pocahontas County—Campbelltown bridge No. 1196, State Route No. 24; C. P. Fortney, Chmn.

W. Va., Bluefield—City, Elmer C. Barton, Mgr., plans receiving bids soon to rebuild Raleigh Terrace, Scott to Monroe; widen Monroe St., 24 to 32 ft., Raleigh Terrace to alley north of Sacred Heart Church; C. E. Lilley, Mayor. 4-17

W. Va., Huntington—Cabell County Court, G. L. Armstrong, Pres., receives bids June 2 to surface 9 roads with gravel, slag, crushed limestone and knapped or crushed stone; 41,964 tons gravel; 32,971 tons crushed slag; 35,971 tons crushed limestone; 26,640 cu. yd. knapped or crushed stone; 112,000 lin. ft. shoulders; J. M. Oliver, County Road Engr.

W. Va., Wheeling—Ohio County Comms., plan widening to 40 ft. Warden and Waddells Run road.

W. Va., Wheeling—City plans widening and straightening Park road, Leatherwood.

Contracts Awarded

Ala., Brighton, Bessemer—City let contract to J. B. McCrary Co., 584 Bankhead Ave., N. W., Atlanta, Ga., at \$135,000 for gutters, 4-ft. sidewalks, 2-in. asphalt on 6-in. conc. paving, storm sewers, 27 blocks of streets, including Huntsville Ave., Water, Edwards, Fielding St.

Ala., Gadsden—City let contract to Rast, Griffith & Jones, Birmingham, Ala., \$112,464, for 58,000 sq. yd. conc. paving, 17,000 ft. curb and gutter, 5000 sq. yd. sidewalks, 11,600 cu. yd. excavation; Percy Todd, City Engr. 5-8

Ala., Tuscaloosa—City let contract to Sullivan, Long & Haggerty, Bessemer, at \$16,282, for street paving. 4-10

Ark., Little Rock—Comms. of Street Improvement Dist. No. 508 let contract to Hogan Construction Co., Home Insurance Bldg., \$326,597, for grading, surfacing avenues, streets and roads 30 ft. wide.

Ark., Rogers—City let contract to Altman-Rodgers Construction Co., Cotton Grain Exchange Bldg., Oklahoma City, \$62,300, for 23 blocks paving in North Side residence section. 4-3

Fla., DeLand—Volusia County Comms., let contract to T. B. Gillespie, Inc., Palatka, for hard-surfacing 2 roads on peninsula south of Daytona Beach. 5-8

Fla., Jacksonville—Duval County Comms., let contract to Suwannee Manufacturing Co., Barnett Bldg., at \$3.04 per ton, for 2,500 tons of slag, and to Pan American Petroleum Corp., Lynch Bldg., at 78 cents per gal., for 33,000 gal. asphalt, for hard surfacing Mandarin and Jacksonville Heights roads; F. M. Edwards, County Engr.

Ga., Cedartown—City, J. J. Cooper, Mayor, let contract to MacDougald Construction Co., 545 Angier Springs road, Atlanta, at \$17,565, for 10,634 sq. yd. Warrenite bitulithic paving on Main St.; Robert & Co., Engrs., Bona Allen Bldg., Atlanta. 5-15

Ga., Columbus—City Comsn., H. B. Crawford, City Mgr., let contract to Campbell Contracting Co., 1312 Tenth Ave., at \$17,377 to pave Twenty-ninth St., Hamilton to Buena Vista roads; to Barlow-Gordy Contracting Co., Garrard Bldg., at \$11,384, to pave Buena Vista road, Henry Ave. to county paving. 4-10

La., Shreveport—City Comsn., L. E. Thomas, Mayor, let contract to R. O. Marks, 1241 Dalzell St., Shreveport, to gravel N. Lafayette St. from North Market to city dump; H. E. Barnes, City Engr.

La., Marksville—City, Mayor and Bd. of Aldermen let contract to Barber Brothers Construction Co., Bogalusa, La., at \$2.05 per sq. yd., for conc. pavement on Main, Marks, Washington and Ogden St. and around Avozelles Parish courthouse.

La., New Orleans—City let contract to Craven & Lang, New Orleans Bank Bldg., \$37,070, for stone curbing and 5860 sq. yd. Warrenite bitulithic paving.

Miss., Holly Springs—City, Mayor and Bd. of Aldermen, let contract to J. P. Rowan, Holly Springs, at \$1.55 per sq. yd. for 2900 cu. yd. excavation, 5380 sq. yd. conc. paving, 3050 lin. ft. combined curb and gutter, drains, etc. 5-8

Miss., Houston—Town, R. F. Brand, Clk., let contract to Noonan Construction Co., E. Lloyd St., Pensacola, Fla., for 45,750 sq. yd. conc. paving, 34,100 lin. ft. conc. curb and gutter; C. N. Harrub Engineering Co., 705 Fourth and First National Bank Bldg., Nashville, Tenn.; will well bonds. 4-10

Miss., Laurel—City Comsn., G. L. Lightsey City Clk., let contract to Vinson Brothers, Hattiesburg, to resurface and retreat 30,000 sq. yd. wood block pavement; Paul C. Klyce, City Engr.

N. C., Graham—Alamance County Bd. of Comms., W. S. Vestal, County Mgr., let contract to Kiker & Yount, Reidsville for about 14,500 sq. yd. tarvia surface treatment, near Graham.

Missouri—State Highway Dept., Jefferson City, let contracts for 61 roads and 2 bridges: Jefferson County—119 mi. 18-ft. pavement, widening, C. F. Johnson & Sons, Buffalo, Mo., \$12,920; Marion County—4.599 mi. 20-ft. conc., Regenhardt Construction Co., Cape Girardeau, \$52,182; Phelps County—3.061, 3.139, 2.233, 3.901 and .072 mi. 20-ft. conc., Regenhardt Construction Co.; Pulaski County—4.905, 2.905, 1.797 and 4.901 mi. 20-ft. conc., A. A. Davis & Co., Cotton-Grain Exchange Bldg., Oklahoma City, \$284,696; Clinton County—2.521 and 2.584 mi. conc., Garrett Construction Co., 211 1/2 E. Commercial St., Springfield, Mo., \$85,909; Lafayette County—7.60 mi. 18 and 28-ft. conc. and 3.662 mi. 18-ft. conc., J. L. Wells Co., Inc., Rock Island, Ill., \$73,252; Marion County—3.456 and 1.904 mi. 18-ft. conc., Peter Simons, Quincy, Ill., \$74,797; St. Francois County—400 mi. 20-ft. conc., Service Construction Co., Poplar Bluff, \$14,791; St. Louis County—1.079 mi. 40-ft. asphalt, Bridges Asphalt Paving Co., 1411 Central Industrial, St. Louis.

In Audrain County—3.939 and 3.950 mi. 18-ft. gravel, B. F. Brooks Construction Co., Love Field, Dallas, \$88,790; Boone County—1.629 mi. 18-ft. gravel, B. F. Brooks Construction Co., \$11,423; Charlton County—4.257, 3.534 and 3.245 mi. 18-ft. gravel, C. J. Tiernan, Macon, Mo., \$11,860; Cooper County—2.878 and 2.782 mi. 18-ft. gravel, Nevada Construction Co., Nevada, Mo., \$64,438; Dent County—2.594, 4.199 and 4.245 mi. 16-ft. gravel, Glenn E. Stoner, Charleston, Mo., \$164,513; Putnam County—782 mi. 18-ft. gravel, C. J. Tiernan Co., \$10,335; Polk County—2.906 mi. 18-ft. gravel, Kelly & Underwood, Granby, Mo., \$54,544; Shannon County—1.806 mi. 16-ft. gravel, C. F. Johnson & Sons; 2.165 and 3.251 mi. 18-ft. gravel, Kelly & Underwood, Granby, Mo., \$74,786; Texas County—4.305 mi. 16-ft. gravel, Lahar Bros., Boonville; Warren County—2.625 mi. 18-ft. gravel, Firmin T. O'Dell, Hannibal; Wright

County—268, 1.108 and 3.426 mi. 18-ft. gravel, Kelly & Underwood; Benton County—3.239 mi. 30-ft. graded earth, Cook & O'Brien Construction Co., Railway Exchange Bldg., Kansas City; Caldwell County—2.239 mi. 30-ft. graded earth, Cherus Construction Co., Minneapolis, Minn.

In Clark County—4.621, 4.788 and 4.868 mi. 30-ft. graded earth, McCarthy Improvement Co., Davenport, Iowa; Butler County—4.489 and 1.761 mi. 12-ft. gravel, Norman Davis, Poplar Bluff, Mo.; Clay County—4.190 and 4.047 mi. 16-ft. gravel, G. Condon Co., Omaha, Neb.; Christian County—3.042 and 3.163 mi. 16-ft. gravel, H. H. Ruddell, Springfield; Madison County—2.599 mi. 12-ft. gravel, Service Construction Co.; Mississippi County—3.648 mi. 7-ft. gravel, Roy L. Williams, Charleston; Ray County—4.844 mi. 12-ft. gravel, A. W. Mosley, 5005 Frostwood Road, Kansas City; Stone County—3.484 mi. 16-ft. crushed rock, M. E. Gillioz, Monett; Webster County—4.524 mi. 16-ft. gravel, R. H. Sharp, Reeds Spring, Mo.; Pemiscott County—3.125 and 3.152 mi. 12-ft. sand, Bunnell & Mack, Paragould, Ark.; Johnson County—4.053 and 4.350 mi. 24-ft. graded earth, C. L. Johnson, Warrensburg; Cooper County—2.46 mi. bridge, Yancey Construction Co., Abilene, Kansas; Grundy County—bridge, Ebbe Construction Co., Trenton, Mo.; T. H. Cutler, Ch. Engr. 4-24

Mississippi—State Highway Coman., Jackson, let contract for 2 roads and bridge; Lafayette County—1.581 mi. Section "C" Oxford and Sardis, also bridge, Mike Harvey, Oxford; Washington County—connecting road from Federal Aid Project No. 59 to Ferry Landing, J. W. Mullins, Boyle, Miss. 6-8

Okl., Oklahoma City—City, M. Peshek, Jr., Chk., let contract to Western Paving Co., 610 Grand St., \$11,391, for 1½-in. Warrenite bitulithic surface on 6-in. conc. base, Eubank St.; from M. A. Swatek Construction Co., 519½ W. Main St., \$7,767, for 7-in. conc. on Eighteenth St.; from Baum Construction Co., \$9,877, for paving Penn. Ave.; W. W. Small, City Engr. 4-24

Tex., Graham—City let contract to West Texas Construction Co., Abilene, \$45,000, for 15,000 sq. yd. bit. paving, South Cherry St. and Park Space.

Tex., San Antonio—City, C. M. Chambers, Mayor, let contract to Colglazier & Hoff, 125 Crosby St., \$25,302, to improve South New Braunfels Ave., Highland Blvd. to Miller St., and Miller St., South Gevers to New Braunfels Ave.; I. Ewig, City Engr.

Va., Hopewell—City, Roy S. Braden, Mgr., let contract to Sam E. Finley, 292 North Ave., N. W., Atlanta, for oil treatment on 5 mi. streets.

Va., Hopewell—City, Roy S. Braden, Mgr., let contract to Atlantic Bitulithic Co., Munsey Bldg., Washington, D. C., to pave City Point road with Warrenite of black tar, from Main St. to Fifteenth Ave.

West Virginia—State Road Coman., Charleston, let contract for 2 roads; Mingo County—5.3 mi. cold tar surface Williamson-Nolan road, Southern Oil & Tar Co., Clay St. and River Road, Louisville, Ky., \$7,921; Putnam County—2.2 mi. cold tar, Pocahontas County line, R. B. Tyler Co., \$5,364. 4-24

Sewer Construction

Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.

Ala., Brighton, Bessemer — See Roads, Streets, Paving.

Ark., Booneville—W. F. Moody, A. O. U. W. Bldg., Little Rock, construct sewer system; cost \$40,000; Dickenson & White, Constr. Engrs., Rector Bldg., Little Rock.

Ark., Fort Smith—Altman-Rogers Co., Cotton-Grain Exchange Bldg., Oklahoma City, Okla., has contract for sanitary sewer system at \$49,073, subject to approval and sale of bonds; install 7 miles of pipe, 6 to 12-in.; W. L. Winters, City Engr.

D. C., Washington—Dist. Commrs. let following sewer contracts: N St. replacement between First and Kirby Sts., N. W., Warren F. Brenizer Co., 101 New York Ave., N. E.; Tenth St. service sewer between V St. and Florida Ave., N. W., to W. A. Pate, Jr., 1048 Twenty-ninth St., N. W.; Potomac Heights storm water sewer, Potomac Ave.

between Manning Place and Newark St. and Newark St. between Potomac and Conduit Rd., Warren F. Brenizer Co.; Good Hope Rd. service sewer between Nineteenth Place and Naylor Rd., M. Cain Co., Inc., 13 Sixth St., E.; Upper Potomac interceptor, section 11, between Canal Rd., N. W., between Hutchins Place and New Cut Rd., N. W., to W. J. McLane, 2402 Hawthorne Ave., Richmond, Va. 5-15

Ky., Louisville—Thomas D. Nolan, 14101 Plymouth Ave., Detroit, Mich., has contract at \$75,159 for construction of Crittenden Drive sewer, Contr. No. 46. 4-17

Ky., Lexington—Louis des Cognets & Co., 413 Main St., has contract for storm sewer from S. Limestone St. to Town Branch; J. White Guyn, City Engr. 3-20

Md., Baltimore—Bd. of Awards receives bids May 28 for sanitary sewers and storm drains, Storm Water Contr. 58. See Want Section—Bids Asked.

N. C., Concord—City plans \$40,000 sewer system.

Okl., Holdenville—City, C. H. Edge, Engr., reported, have plans completed June 15 for sewers and water works extensions; cost \$58,000. 1-16

Tenn., Chattanooga—City will call for new bids May 28 for Brainerd disposal plant; all former bids withdrawn. 4-24

Tenn., Chattanooga—City receives bids on revised plans May 23 for sewerage disposal plant, including buildings, roads and equipment, cost \$160,000; W. H. Wilson, City Engrs. Contractors estimating are: Chas. C. Case, 249 Peachtree St., N. E., Hornbuckle Contracting Co., McGlawn-Bowen Bldg., both Atlanta, Ga.; John E. Stein, James Bldg., Stewart Construction Co., Provident Bldg., and John Parks Co., Hamilton Natl. Bank Bldg., all of Chattanooga; Tucker & Laxton, Independence Bldg., V. B. Higgins, Kinney Bldg., and W. S. McClelland Co., Latta Arcade, all of Charlotte, N. C.; A. H. Guilon & Co., W. Main St., Gastonia, N. C.; W. L. Hailey & Co., 314 42nd Ave., N., Nashville. 4-24

Tex., San Marcos—Texas Sewer Co., W. N. Joiner, Mgr., reported, plans sewer main extension.

Tex., Big Spring—City receives bids May 27 for 1-story, conc. disposal plant and vit. tile outfall sewer; Hawley, Freese & Nichols, Const. Engrs., 411 Capps Bldg., Fort Worth. 3-20

Tex., Dallas—City, reported, rebuild Turtle Creek sewer lines to serve Highland Park and University Park.

Tex., Goose Creek—City Council adopted recommendation of J. Rafferty, Engr., Marine Bank Bldg., for laying storm sewers, Ashbell St. between Pierce and Gulf Sts. 5-1

Tex., Houston — City, W. E. Monteith, Mayor, receives bids May 28 for 2400 sq. ft. continuous vacuum filter area and accessories at North Side sewage treatment plant. See Want Section—Bids Asked.

Tex., Pasadena—City, reported, let contract at \$89,000 for water works and sewers to Klein Bros., 422 N. Walton Ave., Dallas. 3-27

Tex., Port Arthur—City, J. W. O'Neal, Mayor, receives bids June 10 for materials, and constructing Thomas Boulevard storm sewer. See Want Section—Bids Asked.

Tex., San Antonio—City voted \$800,000 permanent storm and sanitary sewers and \$700,000 park bonds. 4-10

Tex., San Antonio—Alamo Concrete Pipe Co., 1430 Hoefgen Ave., reported, has contract for sewer pipe.

Tex., Stephenville—Thurber Construction Co., reported, has contract for \$10,000 storm sewer.

Tex., Van Horn—Van Horn Sewer Co., capital \$35,000, incorporated; R. Durrell, A. J. Smith.

Telephone Systems

Ark., Jonesboro—Agricultural & Mechanical College Broadcasting Co., capital \$10,000, incorporated; V. C. Kays, W. L. Mack; install radio broadcasting station of 250 to 500 watt power in college club building at Jonesboro A. and M. College.

Fla., Jacksonville—Heming Park Building Co., subsidiary of Telfair Stockton Co., H. B. Merritt, 329 Laura St., start excavating for building \$250,000 building about July 1; general contractor to take prices on all materials involved in construction until that date; elec. work by American Electric Supply Co., 330 Riverside Ave.; plumbing and heating, Walter Denson, 2916 Olga Place; elevators, Otis Elevator Co., 225 Liberty St.; George D. Auchter Co., Gen. Contr., 1361 Avondale St. 5-15

Ky., Louisville — McClintic-Marshall Co., Pittsburgh, Pa., has contract for 3000 tons struc. steel for \$1,500,000 first unit of telephone building of Southern Bell Telephone & Telegraph Co., Atlanta, Ga.; Marye, Alger & Vinour, Archt., Atlanta, Ga. 5-1

Ga., Valdosta—John W. Greer, Lakeland, negotiating to establish broadcasting station.

La., Lake Charles—Southern Bell Telephone & Telegraph Co., Atlanta, Ga., Lonnie Clark, Dist. Mgr., expend \$109,000 for improvements in city in 1930; of this amount new estimates totaling \$75,000 have been approved and authority given for work to start at once; improvements include installing new poles, large cables, general remodeling work in business district.

Mo., St. Louis—Western Union Telegraph Co., reported, soon start erecting additional stories to building, Ninth and Chestnut St.; probably convert building into skyscraper.

N. C., Charlotte—Western Union Telegraph Co., John L. Nowell, Supt., 241 S. Tryon St., Charlotte, reported, announced approx. \$3,000,000 will be expended in North Carolina and South Carolina for improvements in 1930; start erecting \$25,000 maintenance building here within about 90 days; sum divided equally between the two states; part of \$45,000,000 general expansion program recently announced by Newcomb Carlton, Pres. (See Baltimore, Md. 5.15)

South Carolina—See Charlotte, N. C.

Tex., Wharton — Southwestern Bell Telephone Co., B. D. Hull, Ch. Engr., Dallas, erect telephone building; rein. conc., brick, cast stone.

Textile Mills

Ala., Decatur — Schwarzenbach-Huber Co., main office Union City, N. J., reported, install modern equipment in local plant, remodel building; manufacture silk.

Ga., Gainesville — Regarding reports that Chicopee Mfg. Corp. of Georgia had plans under consideration for constructing addition to enlarge plant about 50%, E. A. McCormick advises: "In so far as this office is aware there is no building program in view for this corporation."

Ky., Louisville—Stockholders of Louisville Cotton Mills Co., Inc., 1318 McHenry St., vote June 2 at office Fidelity & Columbia Trust Co. to consider increase of capital; changing name to Louisville Textiles, Inc., and manufacture of all classes of textiles; issue \$400,000 of 7% convertible preferred stock of par value \$100 a share and 21,500 shares of common stock of no par value; Wm. S. Speed, Chmn. of Bd.

Md., Havre de Grace—Richards-Ronsheim Vreeland Co., Inc., 43 Leonard St., New York, acquired Brooks Textile Co., changed name to Harford Mills Co.; are rounding out equipment, consisting of thirty-six 50-in. Jacquard looms for weaving upholstery, drapery and chair cloth fabrics; revamping 10 looms; later may consider expansion and installation additional equipment. 5-15

N. C., High Point—LaSalle Textile Corp., capital \$100,000, incorporated; R. E. Blair, 304 S. Main St.

S. C., Pageland—Pageland Thread Mills, capital \$110,000, incorporated; S. A. McFalls, Pageland; R. S. Dickson, Charlotte, N. C.

Tenn., Chattanooga — Negotiations, reported, under way for removing Seldman Braid Mill from Huntsville, Ala., to Chattanooga.

Tex., New Braunfels—Texas Gauze Mills, Inc., reported, install 25 looms. 7-11

Va., Clearbrook—Brucetown Woolen Mills, Inc., Dalley R. Slonaker, Pres., rebuild burned plant; one 60x200 ft. and 30x80 ft. buildings; install 960 spindles; 16 looms; steam power plant; manufacture men's underwear. 5-15

Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that classification.

Ala., Auburn—City voted to sell water works to Alabama Power Co., Birmingham, subject to ratification by people.

Fla., Miami Beach—Moody, Anderson Milling Co., Hollywood, has contract for installing water system to serve Miami Beach Polo

field; 500 ft. of 4-in. c. i. pipe with fittings and booster pump with about 20 h. p. capacity; W. E. Brown Engineering Co., Inc., Civil & Constr. Engrs., Bastian Bldg. 4-17

La., Shreveport—Comsn. Council receives bids May 27 for materials and for laying 5970 ft. of 6-in. water main to municipal airport; plans, etc., at office city engineer.

Md., Baltimore—M. & J. B. McHugh, 3716 Sequoia Ave., have contract at \$47,832 for laying mains Broening Highway.

Md., Baltimore—Angelozzi Construction Co., White and Belle Vista Aves., low bidder at \$131,000 for Storm Water Contr. 110; N. Martell, 4400 Vesta Ave., at \$10,000 for Storm Water Contr. No. 149. 5-8

Md., Baltimore—Bd. of Awards receives bids June 4 for Vernon Pumping Station. See Want Section—Bids Asked. 3-13

Md., Baltimore—Bd. of Awards approved new specifications for clearing Prettyboy dam in Baltimore County; bids to be opened May 28. 4-17

Md., Curtis Bay, Baltimore—Chicago Bridge & Iron Works, Chicago, Ill., low bidder at \$55,250 for steel tank; E. G. Ross, Water Engr. 5-1

Miss., Goodman—Town receives bids May 27 for labor and materials and extension water mains; H. Meek, Town Clk.

Miss., Laurel—Layne Central Co., Chelsea, Memphis, Tenn., has contract at \$15,500 for water well system. 5-8

Mo., Osceola—Missouri Public Service Co., 72 W. Adams St., Chicago, Ill., reported, let contract to L. E. Myers Co., 53 Jackson Blvd., Chicago, Ill., for installing mains; Chicago Bridge & Iron Works, 37 W. Van Buren St., Chicago, for tank and tower; cost \$40,000.

N. C. Wilson—Town receives bids June 5 for rein. conc. filtered water reservoir. See Want Section—Bids Asked.

Okla., Guthrie—City plans voting on \$450,000 bonds for gas distribution system, fire equipment, water works, extension and flood control of Cottonwood River.

Okla., Holdenville—See Sewer Construction.

Tenn., Johnson City—City, reported, plans enlarging reservoir; double capacity.

Tex., El Paso—City, reported, soon call for bids for 4,000,000 gal. water reservoir; cost \$65,000.

Tex., Toyah—See Railway Shops and Terminals.

Tex., Pelly—Ed. S. McFarland, Houston, reported, has contract at \$72,500 for constructing water supply system, including 50 fireplugs; J. H. Rafferty, Marine Bk. Bldg., Houston, will supervise work.

Tex., Denton—Q. D. Lewis, 2101 Market St., reported, low bidder at \$15,000 for 1200 ft. well; Briggs Weaver Machinery Co., 301 S. Main St., both Fort Worth, for pump.

Va., Bedford—Town has had survey made by Allen J. Saville, Inc., Electric Bldg., Richmond, for water supply; plans include pumping station on Big Otter River; cost \$12,000; R. W. Catlin, Town Mgr.

Woodworking Plants

Mo., Kansas City—Hauber Cooperation Mfg. Co., Edward C. Hauber, Pres., 17th and Osage St., changing name to Kansas City Barrel Co.

Mo., Kansas City—Frank Paxton Lumber Co., Kansas City, Kan., acquired Western Veneer & Panel Co., 1736 Troost Ave.

N. C., Liberty—B. J. Gregson, Inc., capital \$100,000, chartered; B. J. Gregson, T. A. Johnson; manufacture novelty furniture of all kinds.

W. Va., Huntington—Huntington Furniture Lines, Inc., capital \$2,000,000, reported, being formed by merger of Nicholson-Kendle Furniture, M. J. Whalen, Pres., 20th St. and Second Ave., and Empire Furniture Co., C. B. Kinkead, Gen. Mgr., 22nd St. and Second Ave.

S. C., Pamplico—Amazon Mfg. Co., capital \$15,000, incorporated; H. M. Propst, E. D. Sprott; manufacture veneer, plywood, etc.

FIRE DAMAGE

Ga., Savannah—Lindsay-McMillan Co.'s building, 2½ miles west of city on Augusta Road; loss \$50,000.

Ga., Valdosta—L. W. Clark's residence, N. Patterson St., owned by W. F. Ethridge.

Ky., Hueysville—Wells-Elkhorn Coal Co.'s tippie, West Garrett.

Ky., Louisville—Bacon Realty Co.'s building, 211 S. 4th St., occupied by Art Shop, J. A. Grawemeyer, Pres., 147 N. Keats St.; loss \$20,000.

Ky., Owensboro—Plant of Owensboro Milling Co.; loss \$63,000.

Ky., Westwood, Ashland—Residence and store of T. N. Newsome, Sr.; loss \$15,000.

La., De Ridder—De Ridder Hatchery and Grocery, First St., owned and operated by Sher Lewis; loss \$10,000.

Md., Park Hall—I. V. McKay's residence and store; loss \$15,000.

Miss., Union—Union Hotel and Amusu Theater owned by S. D. Whittle.

Mo., Atlanta—Lawrence Ateberry & Son's store on Main St.; Pearl Crawford's grocery store; J. W. Lyda's hardware store; loss \$30,000.

N. C., Greensboro—George C. Brown &

Co.'s oil room and sawmill shed at lumber plant, W. Lee St. and Fairgrounds Ave.; loss \$10,000.

N. C., Smithfield—T. S. Ragsdale Co.'s tobacco redrying plant; loss \$40,000.

N. C., Wilmington—Pearsall Fertilizer Co.'s plant, E. Wilmington; loss \$15,000.

Tenn., Shelbyville—Gosling block, comprising 6 business houses, on N. Main St., owned by Wade Gosling.

Tex., Post—Building of Connell Chevrolet Co., Inc.

Tex., Howie—Ayres Hotel; address The Management.

Va., New Market—New Market High School; address Bd. of Education.

Va., Marlboro—L. L. Link's flour mill; loss \$10,000.

Va., Richmond—Manchester Board & Paper Co.'s plant, Canal St.

BUILDING NEWS

BUILDINGS PROPOSED

Association and Fraternal

Va., Roanoke—Roanoke Lodge 197, B. P. O. E., considers erecting 6- to 14-story lodge bldg.; \$300,000 to \$600,000.

Bank and Office

Ala., Evergreen—Peoples Bank and First National Bank merged; enlarge bldg. of former.

Va., Roanoke—Norfolk & Western Railway, W. P. Wiltsee, Ch. Engr., receives bids about May 24 for \$500,000 office bldg., Jefferson and High Sts.; fireproof, steel, conc. and brick, 7 stories, 142x152 ft.; fireproof storage vaults. 10-10

Va., Richmond—Southern Aid Society, 529 N. Second St., remodel and enlarge office bldg., Third and Clay Sts.

Churches

Ark., Little Rock—Wright Ave. Christian Church, Paul Armstrong, Chmn., Bldg. Comm., 2012 W. 19th St., plans \$50,000 bldg., 18th St. and Park Ave.; native stone; church and Sunday school.

D. C., Washington—Christ Lutheran Church, care Smith & Edwards, Archts., 1707 I St., erect \$70,000 bldg.; stone, 1 story, preliminary plans.

D. C., Washington—Society of Friends, 1817 I St., N. W., and 13th and Irving Sts., N. W., erect Washington Friends' Meeting House, Florida Ave., Decatur and Phelps Places, N. W., to supplement present structures; 16,000 sq. ft., 1 story, Colonial type; probably stone; select architect in about 10 days.

Ga., Atlanta—Ingleside Methodist Church, B. F. Forkner, Chmn., Bldg. Comm., has broken ground for \$16,000 bldg., Avondale Estates; H. A. Rawlings, Archt., Decatur, Ga.

Ky., Louisville—Highland Presbyterian Church, Highland Ave. and Cherokee Rd., remodel bldg.; \$60,000; brick, stucco and tile.

La., New Orleans—St. Francis of Assisi R. C. Church, Rev. F. W. Bosch, Pastor, receiving sub-bids to complete interior; wood carving, plastering, millwork, steam heating; erect brick and rein. conc. slab boiler house with slate roof and sheet metal work; Diboll & Owen, Ltd., Archts., Canal Bk. Bldg. 5-1

Mo., Kansas City—St. Andrews P. E. Church erect \$300,000 bldg., Meyer Blvd. and Wornall Rd.; 2 stories and basement; E. Buehler Delf, Archt., Meyer Blvd. and Ward Pkwy. 12-19

Mo., Springfield—Temple Israel Congregation, Max Schwab, Pres., 950 S. Pickwick St., erect brick, tile and stone trim synagogue, Kickapoo Ave. and Belmont St.

N. C., New Bern—Abeleigh Presbyterian Church, Rev. Michael P. Dendy, Pastor, remodel church and erect Sunday school addition; \$15,000; N. Sargent Hamilton, Archt., 2 Spring Lake Drive, Atlanta, Ga.

N. C., Raleigh—First Baptist Church, Colored, erect \$10,000 addition to bldg., Wilmington and Morgan Sts.

Okla., Oklahoma City—University Place Christian Church, Freeman B. Van Horn,

Chmn., Bldg. Comm., 1815 W. 32nd St., having plans completed for \$250,000 bldg.; Colonial type, 3 stories and basement, about 135x115 ft.; Sunday school 45x115 ft.; Walter T. Vahlberg, Archt., Braniff Bldg. 1-2

Okla., Oklahoma City—Church of Christ, Frank Winters, Chmn., Bldg. Comm., 1400 W. 20th St., raising funds for \$90,000 bldg., Tenth St. and Francis Ave.; Gothic type, seat 1200; plans approved; probably let contract within 30 days.

S. C., Charleston—St. Peters and Christ Protestant Episcopal churches consolidated; plan church, parish house and rectory, Rutledge Ave. and Sumter St.; Rev. John H. Morgan, Rector of St. Peters; C. D. Schirmer, member, Bldg. Comm.

S. C., Clinton—First Presbyterian Church, Wm. Jacobs, Chmn., Bldg. Comm., probably have plans ready about June 1 for \$90,000 bldg.; brick, hollow tile and granite, conc. footings, 2 stories, hardwood and tile floors, comp. and slate roof; Willis Irvin, Archt., S. F. C. Bldg., Augusta, Ga. 3-13

Tex., Temple—Seventh St. Methodist Church, Geo. Whisenand, Chmn., Bldg. Comm., erect \$17,000 brick addition; probably let contract about June 1; Wm. C. Meadow, Archt., 6038 W. Lake St., Dallas.

City and County

Ala., Auburn—City Council erect city hall.

Ark., Jonesboro—City Council, Herbert J. Bosler, Mayor, may erect city hall.

Ala., Selma—Dallas County Bd. of Revenue opens bids June 2 for alterations to court room; Frank Lockwood, Archt., 119 Adams St., Montgomery.

Ga., Atlanta—Fulton County Bd. of Comms. and City Council selected Hentz, Adler & Shutze, Candler Bldg., as architects for \$50,000 fire station, Peachtree Rd. near Buckhead; brick, struct. steel, stone trim, 2 stories and basement, conc. footings, comp. roof. 5-1

La., Abbeville—Vermillion Parish Police Jury receives bids until June 4 to remodel courthouse; fireproof; new plumbing, elect. work and fans, plastering, painting, linoleum rubber floors, masonry and carpentry, millwork, etc.; Theo. L. Perrier, Archt., Maritime Bldg., New Orleans.

Miss., Carthage—Leake County Bd. of Supvrs. plans to issue \$90,000 bonds to erect courthouse.

Okla., Oklahoma City—Oklahoma County, R. W. Carlson, Chmn., Bldg. Comm., receives bids May 24 for kitchen, dining room, water tank and tower and heating plant additions to poor farm near Oklahoma City; Ralph James, Archt., 519½ W. Main St.

Okla., Watonga—City voted \$40,000 community hall bonds; brick, 2 stories. 5-1

S. C., Honea Path—Town, D. Mack Reid, Clk.-Treas., having plans drawn by S. M. Cathcart, N. Main St., Anderson, for \$12,000 to \$15,000 city hall and fire dept. bldg.; fireproof, 2 stories, 45.6x40 ft., cement foundation, comp. roof; drawing plans. Address Archt.

Tex., Amarillo—Potter County Comms. Court receives bids June 9 for automobile

show bldg., Tri-State Fair grounds; \$22,500; Rittenberry & Carder, Archts., Fisk Medical and Prof. Bldg. 5-1

Tex., Fort Worth—City, O. E. Carr, City Mgr., plans 4-story police station, Texas St.; vote on bonds in Fall; brick, conc. and steel, tile toilets, steam heat; Wyatt C. Hedrick, Inc., Archt., First Natl. Bk. Bldg.

Tex., San Antonio—City, C. M. Chambers, Mayor, receives bids May 26 at office Jas. Simpson, City Clk., for stage equipment for open air theater, Brackenridge Park; Harvey P. Smith, Archt., Natl. Bk. of Commerce Bldg. 4-10

Tex., San Antonio—City, C. M. Chambers, Mayor, voted \$4,975,000 bonds, including \$600,000 for erecting and equipping fire and police stations, \$150,000 for sports bldg. and stadium at Exposition Grounds, and \$150,000 for 100-bed children's annex to Robert B. Green Memorial Hospital. 4-10

Va., Cape Charles—Town votes June 10 on \$25,000 municipal bldg. bonds. Address Town Council.

Va., Williamsburg—James City County Bd. of Supvs., Frank Armistead, Judge, erect \$150,000 courthouse, England and Francis Sts.

Dwellings

Ala., Birmingham—Edw. D. Slater, Archt., 635 Martin Bldg., about completed plans for brick veneer, stucco and half timber dwelling, Wellington Rd., Mayfair; 2 stories and basement, 48x36 ft., comp. roof, steam heat.

D. C., Washington—Philip Hubert Frohman, care Frohman, Robb & Little, Archts., 16 Jackson Place, erect brick residence, 36th and Macomb Sts.

D. C., Washington—Wm. A. Hill Co., 730 17th St., N. W., has permit for \$60,000 dwelling, 2934 Edgevale Terrace, N. W.; stone and conc. block, 3 stories.

Fla., Lake Wales—F. W. Lafrentz, care Parsons, Wait & Goodell, Archts., 1 Beacon St., Boston, Mass., erect stucco and hollow tile residence, Mountain Lake; 2 stories and basement, conc. foundation, tile roof.

Fla., Miami Beach—Saml. J. Hale has permit for \$15,000 residence and garage, 4556 Prairie Ave.; rein. conc., conc. block & stucco; day labor.

Fla., Palm Beach—Mrs. Gordon Douglas, erect residence, Jungle Rd.; Treanor & Fatlo, Archts., both Phipps Plaza, Palm Beach.

Fla., Palm Beach—Dr. McCarthy, Philadelphia, Pa., erect 2-story and tower Spanish type residence, Singer Place; Treanor & Fatlo, Archts., Phipps Plaza, Palm Beach.

Fla., St. Petersburg—L. W. Mulford, 5305 Central Ave., erect \$37,500 residence; stucco and hollow tile, 1 and 2 stories, 70x60 ft., hardwood and tile floors, tile roof, steam heat; orna. pool; Jonsberg & Wakeling, Archts., Times Bldg.; plans ready about May 22.

Fla., Tampa—Mrs. McManus, care Frank A. Winn, Jr., Archt., Stovall Bldg., erect \$30,000 residence; work start early part 1931.

Ga., Atlanta—Mrs. Florence S. Cannon has low bid at \$13,334 from S. G. Walker, Hapeville, for residence; R. S. Monday, Archt., Norris Bldg. 5-8

La., New Orleans—G. A. Schmidt, 3611 Delgado Drive, considers erecting residence, Gentilly Blvd. and Music St.; will not build until sale of present residence.

La., New Orleans—Mrs. A. Mathe, 2510 Robert St., erect frame duplex, Robert St. near Magnolia St.; Atlas tile or Johns-Manville roofing; ready about 1 week for sub-bids.

La., New Orleans—M. Sazer, 2017 Chestnut St., erect 2 single stucco dwellings and garages, Vincent Place near Hewes St.; 51x36 ft., asbestos roofs; \$10,000.

Md., Baltimore—Wm. J. T. French, 3403 Hillsdale Road, plans residence, Enfield Rd. Md., Baltimore—Century Corp., Bldr., Morris Bldg., erect 6 dwellings and garages, 4700 block Edmondson Ave.; \$30,000.

Md., Baltimore—Milton R. Lerch, Bldr., 5206 Harford Road, erect 12 brick dwellings, 5862-84 block Belair Rd.; 2 stories, 15x32.9 ft., hot water heat; \$27,000; Fredk. Beall, Archt., 334 St. Paul St.; owner builds.

Md., Stevenson—C. A. Wilson, Guilford Ave., and Saratoga St., Baltimore, erect \$25,000 residence; stone, 2 stories.

Miss., Meridian—R. G. Houghton, 2921 Seventh St., erect \$10,000 residence, Grand View Ave.

Mo., Kansas City—Smith & Siemens Corp. has permit for \$20,000 dwelling, 1235 W. 64th St.

N. C., Charlotte—R. P. Covington, 500 E. 11th St., erect \$10,000 residence, 2224 Greenway; brick veneer, 8 rooms.

N. C., Morganton—Ernest Giles have plans completed about May 30 by Henry Irven Gaines, Archt., 144 Public Service Bldg., Asheville, for \$20,000 residence; brick, 2 stories and basement, 66x30 ft., oak floors, brick and conc. foundation, asbestos roof. Address Archt. 5-15

N. C., Raleigh—Dr. D. B. Anderson, 26 Bagwell Ave., erect brick veneer residence; 2½ stories, oak floors, slate roof, steel sash misc. iron, hot air heat; Nelson & Cooper, Archts., 126½ S. Salisbury St., bids in.

Okla., Oklahoma City—O. K. Wetzel, Continental Bldg., considers erecting \$20,000 residence; brick veneer, 2 stories.

Tenn., Lookout Mountain—Mrs. Kathleen Pound Caldwell, 311 Vine St., Chattanooga, erect mountain stone and old brick residence; 2 stories, 3 baths, garage.

Tenn., Lookout Mountain—R. P. Purse, Pres., Purse Printing Co., 435 Chestnut St., Chattanooga, erect residence, 5-acre tract.

Texas—Del Monte Development Co., Inc., Thos. T. Taylor, Pres.-Mgr., 808 Mavarrick Bldg., San Antonio, erect 15 dwellings, connection with development of 648-acre tract in Zavalla County for town; town to be called Del Monte.

Tex., Austin—Dr. N. R. Jackson, Norwood Bldg., erect \$15,000 residence, Pemberton Heights; brick veneer, 2 stories, oak and tile floors, asbestos shingle roof; Edwin C. Kreisle, Archt., Scarbrough Bldg.; drawing plans.

Tex., Fort Worth—John T. Cross, 3830 Tulsa Way, erect brick veneer residence, garage and servants' quarters; 2 stories and basement, 38x46 ft., oak floors, tile roof, tile baths; Jos. R. Pelich, Archt., W. T. Waggoner Bldg.; drawing plans.

Tex., Houston—E. E. Dattner, 1408 Michigan St., erect \$15,000 residence, 2120 Brentwood St.; brick veneer, 5 rooms.

Tex., Houston—Roy Corbin erect \$10,000 dwelling, 2602 Southmore St.; brick veneer, 9 rooms.

Tex., Houston—R. W. Bler, representative of Union Steam Pump Sales Co., Second Natl. Bank Bldg., plans residence, Pelham Drive and Chilton Rd., River Oaks.

Tex., Houston—H. W. Nevin erect 2-story residence, Brentwood St. and Belmeade Court, Live Oaks.

Tex., Houston—J. B. Green, care Green & Green, 2000 Providence St., purchased home-site, River Oaks.

Tex., Houston—J. J. Kinkad, 8201 Concord St., erect residence, Live Oaks.

Tex., San Antonio—Ed. H. Knowlton, care L. Harrington Co., Archt.-Engr., Builders Exch. Bldg., has low bid at \$13,522 from Allen & Allen for residence. 5-1

Tex., San Antonio—E. R. Tibbets, Real Estate Bldg., has low bid at \$22,000 from P. F. Allen for residence, Paseo Encinal, Olmos Park; Philip Lloyd Shoop, Archt., Real Estate Bldg.; Lilly-Drought, Engrs., Frost Nat'l Bk. Bldg. 5-15

Tex., Shamrock—Panhandle Power & Light Co., Borger, Tex., plans seven 5-room dwellings, connection with \$3,000,000 plant construction.

Va., Fredericksburg—J. B. Rawlings erect residence.

Va., Keswick—Henry Rowland erect residence.

Va., Virginia Beach—L. H. Windholz, Atlantic Ave., erect residence; Wickham C. Taylor, Archt., Citizens Bank Bldg., Norfolk.

Va., Virginia Beach—Lawrence Lockwood, Ocean Ave., erect residence; Rudolph, Cooke & Van Leeuwen, Archts., Arcade Bldg., Norfolk.

Government and State

Ala., Montgomery—State Health Dept. Dr. J. N. Baker, State Health Officer, erect bldg. adjoining present quarters.

Ark., El Dorado—Treas. Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., has plans nearing completion for \$450,000 Federal bldg.; probably call bids about July 1; site 120x240 ft. 4-3

Ark., Searcy—Arkansas National Guard, Brig.-Gen. E. L. Compere, Adj. Gen., Little Rock, having plans drawn by Durward F. Kyle, Archt., National Bldg., Pine Bluff, for \$20,000 armory; brick and conc., 1½ stories, about 75x115 ft. 2-20

D. C., Washington—Architect of The Capitol, David Lynn, opened bids May 21 (extend-

ed date) for clearing site, excavating and foundation work for office bldg. for House of Representatives; drawings from above; structure \$7,500,000, marble; plans by Allied Architects of Washington, Inc., 16 Jackson Place, N. W.; T. N. Marshall, Struct. Engr., 1341 Connecticut Ave., N. W., G. A. Weschler, Mech. Engr., 16 Jackson Place. 5-1

Fla., Miami Beach—Postmaster O. W. Pittman receives bids until June 30 for quarters for post office; 10,000 sq. ft. floor space; specifications from postal cashier, 329 Federal Bldg., Miami.

La., New Orleans—Postmaster W. L. S. Gordon receives bids June 28 for post office sub-station, vicinity Carrollton and Oak Sts.

Md., Hagerstown—State Bd. of Welfare, Stuart S. Janney, Chmn., Baltimore, has option on 750-acre tract in Roxbury district near Hagerstown, as possible site for proposed \$2,000,000 to \$4,000,000 prison.

Mo., Aurora—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., reported, drawing sketches for \$70,000, one-story post office, Locust and Jefferson Sts.

Mo., Sikeston — Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., reported, erect \$70,000 post office.

Okla., Granite—State erecting auditorium, State Reformatory, by day labor; granite walls, conc. slabs, 2 stories, 50x140 ft., cement floors, built-up roof; Brown & Myers, Engrs., 1721 Petroleum Bldg., Oklahoma City; address equipment proposals to Mrs. George A. Waters, Warden, Granite, See Want Section—Building Material and Equipment. 5-15

Tenn., Newport—Newport Post, American Legion, and Cooke County will raise \$20,000 for war memorial bldg.; \$20,000 appropriation available from State.

Tex., Corsicana—State Bd. of Control, Austin, receives bids May 26 for dairy barn and alterations and additions to basement of administration bldg. and to first and second floors of boys' dormitory, State Orphans' Home; plans from DeWitt & Washburn, Archts., Kirby Bldg., Dallas.

Va., Buena Vista—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids June 18 for post office; drawings from office Supvg. Archt.

Va., Buena Vista—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids June 18 for post office; \$75,000; drawings from office Supvg. Archt., Washington, D. C. 5-8

Va., Roanoke—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., probably call for bids by Aug. 1 for post office, Commerce and Church Sts.; granite base, brick and stone above, 195x121 ft., 32,910 sq. ft. ground area, 3 stories and basement; \$525,000 available. 2-13

Va., Fort Myer—Constructing Quartermaster, Munitions Bldg., Washington, D. C., receives bids June 11 for service detachment stable, Fort Myer.

Va., Newport News—City votes June 10 on \$70,000 armory bonds and \$50,000 city prison farm barracks. 1-16

Va., Richmond—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., reported, advertise for bids May 19 for extending and remodeling post office, custom house and court house; \$950,000 available. 3-20

Va., Virginia Beach—U. S. Property & Disbursing Officer, Richmond, receives bids June 2 for ammunition bldg., State Rifle Range.

Hospitals, Sanitariums, Etc.

Ark., North Little Rock, Little Rock—U. S. Veterans Bureau, Arlington Bldg., Washington, D. C., has low bid at \$29,500 from Marcus Jorgenson, 1611 N. California Ave., Chicago, Ill., for laundry, including paving and grading, U. S. Veterans Hospital; rein. conc., hollow tile, brick, cast stone, iron work, steel sash, metal stall partitions, slate roof, etc. 5-1

D. C., Washington—Constructing Quartermaster, Army Medical Center, receives bids in triplicate until June 12 for center unit of nurses' quarters and utilities; plans, etc. from above.

La., New Orleans—New Orleans Hospital and Dispensary for Women and Children, Miss Dymond, Pres. of Bd., inaugurate fund campaign early in 1931 for \$300,000 bldg.; Favrot & Livaudais, Ltd., Archts., Hibernia Bldg.

Ky., Lexington—Good Samaritan Hospital has plans nearing completion by Clifford F. Reichert, Archt.-Engr., Starks Bldg., Louisville, Ky., for \$200,000 to \$250,000 addition, Limestone St.; Classic type, fireproof, brick

and Bowling Green stone, 4 stories, 120 ft. front, elevators, acid-resisting plumbing with chromium plated fixtures, elect. dumb waiters to diet kitchens; private rooms, each with bath, on 3 upper floors; rooms to have telephones and detachable radio connections; chapel; buff marble wainscot and floor in lobby; signal systems; Henry L. Ott, Passagrille, Fla., and Crestwood, Ky., Pres. of Bd. of Trustees and member of Bldg. Comm. 5-8

La., Shreveport—El Karubah Temple, A. A. O. N. M. S., Jas. H. Rowland, Sec., received bids May 22 for improvements to hospital for crippled children; \$30,000; brick and stucco, wards and machine shop; Edw. F. Neild, Archt., City Natl. Bk. Bldg.; following contractors estimating: W. Murray Werner, Commercial Bank Bldg., Gilman McConnell, Ricou-Brewster Bldg.; K. C. Wilson, Slattery Bldg.; Ashton Glassell, Ricou Ave. 4-17

La., New Orleans—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., opens bids June 24 for Marine Hospital bldg. (except elevator and dumbwaiter); drawings from office Supvg. Archt.; \$2,000, 000, 600 beds; main bldg. 5 stories; 3-story administration bldg.; 4-story surgical ward; laundry; power plant; garage; refrigeration plant; quarters for officers and nurses; storage bldg., workshops, etc.; hospital, administration bldg. and mess hall connected; brick, iron grille, slate roof. 5-8

Miss., Lexington—Holmes County votes May 30 on \$50,000 bonds to purchase site and erect Holmes County Community Hospital. 5-8

N. C., Roanoke Rapids—Roanoke Rapids Hospital has low bid from J. W. Stout, Inc., Sanford, for nurses' home; Eric G. Flannagan, Archt., Henderson. 5-15

Okl., Oklahoma City—Citizens Hospital Assn. probably have plans ready latter part of May for \$200,000 hospital; brick, stone and rein. conc., 3 stories 50-bed unit this year; completed structure H shape, 5 stories; Tonini & Bramblett, Archts., 416½ W. Main St. 3-20

Okl., Bartlesville—Washington County Bd. of Comms. may erect \$75,000 addition to Washington County Hospital, would probably call bond election. 5-8

Okl., Tulsa—St. Johns Hospital erect 2-story nurses' home and 2-story addition to hospital. 5-8

Okl., Woodward—Woodward Hospital Assn. erect \$18,000 addition, Woodward Hospital; brick and rein. conc., 2 stories, 27x60 ft. 5-8

Tenn., Bolivar—State, Richard H. Lyle, Commr. of Institutions, receives bids May 30 for 3-story hospital bldg., Western State Hospital for Insane; brick, stone and rein. conc., 3 stories and basement, about 400x37 ft., tile floors and roof, 400 beds; Wyatt C. Hedrick, Inc., First Natl. Bk. Bldg., Fort Worth. 5-8

Tex., Galveston—State Bd. of Control, Claude D. Teer, Chmn., Austin, probably call bids in about 1 week for \$150,000 psychopathic hospital; 4 stories; Wyatt C. Hedrick, Inc., Archt., First Natl. Bk. Bldg., Fort Worth. 3-20

Tex., Odessa—Ector County votes May 26 on \$65,000 hospital bonds. 5-8

Tex., San Antonio—City, C. M. Chambers, Mayor, voted \$150,000 bonds for children's annex to Robert B. Green Memorial Hospital. 4-10

Va., Richmond—Grace Hospital, 401 W. Grace St., erect \$75,000 annex. 5-8

W. Va., Weston—State Bd. of Control, Charleston, receives bids until July 7 for medical center, Weston State Hospital; conc. foundation, smooth red brick, Bedford limestone trim, 3 stories, no basement, 54.3x197.8 ft., salt glazed brick interior walls, conc. joist with tile filler floor and ceiling constr., slate roof over frame, conc. stairways and ramps, cement, terrazzo and tile floors, wood doors and trim, plaster ceilings; heating, plumbing and elect. work in separate contracts, warm air fan system and radiator heating; R. A. Gillis, Archt., Fleming Bldg., Fairmont. 5-8

Hotels and Apartments

Ark., Hot Springs National Park—Fred Gray, 615 W. Grand Ave., plans \$15,000 apartment on W. Grand Ave. 5-8

Ark., Little Rock—Kermit J. Milner erect \$10,500 apartment, 3101 Ozark Ave. 5-8

Fla., Miami Beach—Van Ness Bros., Dudley R. Van Ness, 116 Fourteenth St., erect 5-story, rein. conc., conc. block and stucco, 100-room hotel, Ocean Drive at 14th St.; R. A. Preas, Archt., 325 Twenty-third St. 5-8

Fla., Miami Beach—Taradash Properties, Inc., 1461 Washington Ave., has low bid at \$81,750 from C. R. Clark, Bastain Bldg., for 3-story and basement, rein. conc. block, tile and stucco, 18-apartment, Collins Ave. and 35th St.; Martin L. Hampton, Archt., 925 Lincoln Road. 5-15

Fla., St. Petersburg—Edgar Fardon, Archt., Sumner Bldg., advises J. H. Flood decided not to erect \$25,000 hotel at this time. 5-15

Ga., Brunswick—Brunswick Beach Corp., Jennings Butts, Sales Dir., negotiating with interests who plan erection of hotel in connection with development of Brunswick Beach. 5-15

Mo., Kansas City—Snyder Realty & Investment Co., Commerce Bldg., has permit for \$180,000, 11-story, 145x73 ft., 104-apartment hotel, 233-45 E. Armour Blvd. 5-15

Mo., Odessa—Joseph Powell plans \$20,000, 2-story, stucco, 20-room hotel on U. S. Highway No. 40. 5-15

Mo., Springfield—Roscoe Stewart, 743 E. Walnut St., and associates, reported, plan erecting \$800,000, 12-story, 225-room hotel; Preston J. Bradshaw, Archt., 718 Locust St., St. Louis. 5-15

N. C., Charlotte—Shuford Peeler, Salisbury, has permit for \$10,000 brick apartment, 1316 Kenilworth Ave. 5-15

N. C., Charlotte—R. L. Ritch & Son, 308 N. McDowell St., have permit for \$30,000, brick veneer, 56-room apartment, 1100 block East Boulevard. 5-15

Tenn., Memphis—Alfred Walker, Route 3, Box 345, erect \$16,000, 2-story, 32x123 ft., 20-apartment, 1215 Manassas St.; comp. roof, oak floors. 5-15

Tex., Brownsville—Wm. D. Van Sieten, Owner and Archt., State Natl. Bank Bldg., ready for bids for \$18,000, 2-story, 25.4x104.8 tile, stucco and rein. conc. Spanish type, 8-apartment; built-up and tile roof, oak floors. See Want Section—Building Material and Equipment. 5-8

Tex., Olney—Dr. George B. Hamilton erect 3-story hotel. 5-8

W. Va., Charleston—Joe Cole erect \$10,000 apartment, 615 Virginia St. 5-8

W. Va., Charleston—A. H. Brown, 1002½ Washington St., has permit for \$10,000 apartment and store, 909 Washington St. 5-8

Miscellaneous

D. C., Washington—Joseph Phillips Co., 10 Wholesale Row, has permit for six 2-story, brick and conc. market buildings, 1250-58 Fifth St., N. W., and 416 Morse St., N. E.; \$40,000. 5-8

La., New Orleans—Protestant Home for Babies, Mrs. A. T. Gastrell, Sec., 1233 Eighth St., plans campaign to raise \$100,000 for expansion program. 5-8

Mo., St. Charles—Emaus Asylum, Theo. Stoerker, Supt., having plans prepared by T. P. Barnett Co., Arcade Bldg., St. Louis, for \$70,000, 2-story and basement, 30x126 ft., brick and rein. conc. addition to building, Randolph St. and City limits. 5-8

Tex., Brownsville—J. M. Putnam, 2561 W. 20th St., and associates, Oklahoma City, purchased properties near terminus of Boca Chica Road and, reported, plan \$1,000,000 pleasure resort at Boca Chica Beach; improvements planned include resort hotel, bathing piers, restaurants, dancing pavilions and yacht basin. 5-8

Tex., Richland Springs—Lon P. Piper, of Grande Courts Corp., 755 E. Mulberry St., San Antonio, expend \$25,000 for improvements to Richland Springs Cavern to include 20x30-ft., granite rock clubhouse, tourist cottages, bathing pool, golf course, etc. 5-8

Tex., San Angelo—George Henshaw having plans prepared by Anton F. Korn, Jr., Thomas Bldg., Dallas, and C. C. Alexander, San Angelo Natl. Bank Bldg., San Angelo, for 1-story, tile and stucco clubhouse and conc. swimming pool; \$100,000. 5-8

Railway Stations, Sheds, Etc.

Mo., Kansas City—Chicago, Milwaukee, St. Paul & Pacific R. R., C. W. Loweth, Ch. Engr., Chicago, erect 2-story addition to freight station; extend 200 ft. on Liberty St., lay tracks, etc.; \$200,000. 5-8

Mo., Kansas City—Missouri Pacific R. R., E. A. Hadley, Ch. Engr., considering erecting \$50,000, 2-story and basement, 60x100-ft. freight station. 5-8

Schools

Ala., Dora—School Bd. erect 6-classroom, brick addition to Dora High School. 5-8

Ala., Cullman—Sacred Heart Academy erect chapel and auditorium; Carey & Bowling, State Office Bldg., Archts., Mobile; bids in May 30. 5-8

Ark., Bright Star—Bright Star Consolidated School Dist., care Otto Forehand, Miller County Supt. of Schools, Texarkana, ready for bids for \$25,000, 1-story, brick and conc., 10-classroom and auditorium school; plans by State Dept. of Education, Statehouse, Little Rock. 5-8

Ark., Fayetteville—Washington County Bd. of Education, O. W. Bass, Supt., having plans prepared by Haralson & Nelson, Merchants Natl. Bank Bldg., Fort Smith, for 2 grade schools; 2 stories, brick, 12 classrooms \$60,000. 4-3

Ark., Hackett—Hackett Special School erect \$20,000, 1-story, brick and conc., 7-classroom and auditorium school; comp. roof; plans by State Dept. of Education, Statehouse, Little Rock. 2-27

Ark., Hot Springs National Park—School Bd. erect \$15,000 consolidated grade school on Hot Springs-Little Rock highway. 5-8

Ark., Newport—Newport Special Dist. School Bd., F. A. Stuart, Sec., receives bids June 2 for \$100,000, 2-story brick school at Remmel Park; plans from Thompson, Sanders & Ginocchio, Archts., Hall Bldg., Little Rock. 5-1

Ark., Little Rock—School Bd., R. C. Hall, Supt., having plans prepared by Petter & McAninch, Pyramid Life Bldg., for auditorium for Rightsell School; seat 300 people. 5-1

Fla., Millville—Bay County Bd. of Public Instruction erect school to replace burned structure. 5-8

Fla., Tampa—Hillsborough County Bd. of Public Instruction, W. D. F. Snipes, Supt., receives bids June 5 for \$21,000, brick and tile, 5-classroom school in Lake Magdalene section to replace recently burned structure; Frank A. Winn, Archt., 207½ Twigg St.; construct new roof on Robert E. Lee School; \$5000; M. Leo Elliott, Archt., 706 Franklin St.; B. M. Sullivan, Civil Engr., 509 Twigg St., to prepare plans for storm water drainage system at Hillsborough High School; \$5000. 5-8

Ga., Atlanta—Alpha Tau Omega Fraternity, Emory University, erect \$31,000, 11-bedroom fraternity house; Georgian colonial; Edwards & Sayward, Archts., 101 Marietta St.; Robert Logan, Asso. Archt. 5-8

Ga., Blue Ridge—Bd. of Education, Wm. Butt, Chmn., receives bids June 2 for \$65,000, 1-story and basement, brick, 14-classroom and auditorium school; comp. roof, hardwood, cement and tile floors; Lockwood & Poundstone, Archts., Marietta Bldg., Atlanta. 5-8

Ga., Atlanta—Georgia School of Technology, Dr. M. L. Brittain, Pres., receives bids June 5 for \$90,000, 3-story and basement, rein. conc., brick and tile aviation building; stone trim, comp. roof; plans by Bush-Brown & Bailey, care Architectural Dept., Georgia School of Technology; ready for distribution by May 26. 5-1

Ga., Vidalia—Trustees, Ellabelle-Eldora Consolidated School Dist. erect brick school on Route 30 between Lanier and Blighton, Bryan County; bids in; plans from J. T. Stubbs. 5-1

Ga., West Point—Bd. of Education receives about June 12 for \$65,000, 1-story and basement, brick school; comp. roof, tile, cement and hardwood floors, hot air or steam heat; Dennis & Dennis, Archts., 556 Mulberry St., Macon. 4-17

Ky., Lexington—University of Kentucky, Dr. Frank L. McVey, Pres., award contract June 1 for \$25,000, 2-story, brick and conc. observatory building; Townner & Sellers, Archts., Middletown, Conn. 5-15

Ky., Livermore—Bd. of Education receives bids May 26 for high school; separate bids on brick and tile work, mill work, steel work, conc. work. 5-15

Ky., Richmond—Eastern Kentucky State Teachers College, G. M. Brock, Business Agent, award contract June 14 for Charles F. Weaver Gymnasium; \$150,000, brick and steel, 100x220 ft.; seat 1500 people; C. C. & S. K. Weber, Archts., Ingalls Bldg., Cincinnati, Ohio. 5-15

Ky., McHenry—Bd. of Education plans high school to replace structure recently burned at loss of \$40,000. 5-15

Ky., Monticello—Bd. of Education received bids May 23 for addition to school; plans from Churchill & Gillig, Fayette Bank Bldg., Lexington. 5-15

La., Alluvial City—St. Bernard Parish School Bd., Mrs. L. A. Mearaux, Pres., St. Bernard, receives bids June 3 for \$20,000, 1- 5-8

story and basement, 50x90 ft., rein. conc., brick and tile, 6-classroom school; wood floors, steam heat; Wm. R. Burk, Archt., Balter Bldg., New Orleans. 5-1

La., Forest—West Carroll Parish School Bd., Oak Grove, having plans prepared by Clarence W. King, Giddens-Lane Bldg., Shreveport, and Bernhardt Bldg., Monroe, for 6-classroom addition and improvements to brick high school; \$30,000. 5-15

La., Jackson—East Feliciana Parish School Bd., P. H. Dupuy, Sec., Clinton, receives bids June 11 for \$40,000, brick high school; stone trim, comp. built-up roof; Herman J. Duncan, Archt., 120 Murray St., Alexandria. 4-24

La., Mangham—Richland Parish School Bd., J. A. Ball, Pres., Rayville, having plans prepared by J. W. Smith & Associates, Ouachita Natl. Bank Bldg., Monroe, for addition to high school at Mangham, also gymnasium and cafeteria; \$35,000 grade school at Alto; \$35,000 grade school at Archibald; \$25,000 grade school in Dist. No. 13. 3-20

La., Rayville—School Dist. No. 18, E. E. Keebler, Sec., voted \$225,000 bonds for high school at Rayville, grammar school at Holly Ridge and repairs to present schools in district. 4-24

Md., Annapolis—Navy Dept., Bureau of Yards and Docks, R. J. Potbury, Ch., Washington, D. C., has low bid at \$14,773 from Thomas Moulding Acoustical Engineering Co., 165 W. Wacker Drive, Chicago, Ill., for acoustical treatment of chapel at Naval Academy.

Md., Baltimore—Girls' Latin School, John L. Alcock, Pres., Bd. of Directors, Club Road, Roland Park, started campaign to raise funds for library, laboratory and gymnasium.

Md., Union Bridge—Carroll County School Commrs., M. Unger, Supt., Westminster, having preliminary plans prepared by B. E. Starr, 7 S. Market Sq., Harrisburg, Pa., for \$75,000, 2-story, brick, 15-classroom high school.

Miss., Bond—Bd. of School Trustees, G. H. Barnhill, Sec., received bids May 23 for annex to school.

Miss., Verona—Verona Consolidated School Dist. Bd. of Trustees, D. C. Lawhon, Sec., receives bids June 5 for \$20,000, 1-story brick veneer, 10-classroom and auditorium school; plans from Dewey Patterson, Lee County Supt., Tupelo. 4-10

Miss., Horn Lake—Horn Lake Consolidated School Dist. voted \$40,000 bonds for 1-story, 15x34 ft., brick high school; W. G. Eckles, Archt., 302 Mt. Vernon St., Jackson. 3-27

Miss., Gulfport—Woolmarket Consolidated School Dist. voted \$28,000 bonds for school; address Harrison County Bd. of Education. 5-1

Miss., McAdams—Bd. of Trustees, Attala County Agricultural High School, receives bids June 12 for 2-story, 42x136 ft., rein. conc. and brick dormitory for girls; 26 rooms, dining room and kitchen; comp. roof; plans after May 24 from Hull & Malvaney, Archts., Merchants Bank Bldg., Jackson. 4-10

Miss., Jackson—Hinds County Bd. of Education soon ready for bids for \$30,000, 1-story, 210x60 ft., rein. conc. and brick, 8-classroom and auditorium school at Forrest Hill; stone trim, built-up comp. roof, wood floors; Hull & Malvaney, Archts., Merchants Bank Bldg. 5-15

Miss., Oak Vale—Jeff Davis-Lawrence Consolidated School Dist. plans building for agricultural and home economics departments.

Mo., Brunswick—Bd. of Education plans high school and repairs to present schools; \$60,000.

Mo., Concordia—St. Paul's College, Rev. Ernest Rung, Sec., Bd. of Control, plans \$30,000, 1-story, brick power house; Lewis B. Wilson, Archt., Walsix Bldg., Kansas City.

Mo., Stark City—School Dist. No. 9 voted \$27,000 bonds for 7-classroom school midway between Stark City and Newtonia; Floyd Kirtz, Pres., Bd. of Education.

Mo., St. Louis—Riverview Gardens Public School Dist., Mrs. Etta M. Schuchardt, Sec., Baden Station, R. R. No. 14, Box 890, has low bid at \$30,399 from Higbee Bros. Construction Co., 4161 Delmar Blvd., for 2-story and basement, 79x36 ft., brick and rein. conc., fireproof addition to Marvin School, St. Charles and Woodson Road; Wm. B. Ittner, Inc., Bd. of Education Bldg.

N. C., High Point—Bd. of Education, T. Wingate Andrews, Supt., has low bid at \$77,984 from Acme Lumber Co., Kernersville, for 2-story, 80x350 ft., brick and hollow tile elementary school; comp. roof, stone trim, ter-

razzo and wood floors; Eccles Everhart, Archt., Commercial Bank Bldg. 5-8

N. C., Lexington—Bd. of Education erect school for high and elementary grades and another building for elementary grades.

N. C., Madison—Madison School Dist. Trustees having plans prepared by Harry Barton, Jefferson Bldg., Greensboro, and ready for bids about Aug. 1 for \$90,000, 2-story, brick, semi-fireproof, 18-classroom high school; auditorium to seat 800. 4-17

N. C., Mount Airy—School Bd., L. B. Pendegraph, Supt., received bids May 23 for additions to Rockford Street school; separate bids for plumbing and heating.

N. C., Newton—Catawba County Bd. of Education, J. A. Capps, Supt., receives bids May 26 for auditorium at Banoak School; M. R. Marsh, Archt., Builders Bldg., Charlotte.

N. C., Wilmington—New Hanover County Bd. of Education, O. A. Hamilton, Supt., receives bids May 28, 29 and 30 for Williston colored school, New Hanover High School and Isaac Bear School; first of school improvement program for which \$355,000 bonds were recently sold. 5-1

Okla., Colbert—Bd. of Education, C. R. Carter, Clk., erect \$50,000, 2-story and basement, 99x148 ft., brick, stone, rein. conc. and steel, fireproof school; Albert S. Ross, Archt., Ada; bids in.

Okla., El Reno—Canadian County School Bd. received bids May 23 for school in School Dist. No. 98; plans at office County Supt., Courthouse, El Reno, or from N. F. Ankney, Route 3, Calumet, Okla.

Okla., Frederick—Bd. of Education, Consolidated Dist. No. 13, Will G. Weaver, Clk., plans \$15,000, brick school near Frederick; plans election on bonds.

Okla., Holdenville—Holdenville School Dist. considering \$36,000 bond election.

Okla., Sayre—Bd. of Education, Oscar Ewton, Clk., having plans prepared by The Butler Co., Insurance Bldg., Oklahoma City, for 1-story and basement, brick school. 5-8

Okla., Walters—Bd. of Education, E. R. Taylor, Clk., soon ready for bids for \$18,000 school.

Okla., Wewoka—Bd. of Education, Calvin Vance, having plans prepared by Albert S. Ross, Ada, for \$35,000, 2-story and basement, brick, tile and conc. high school.

Okla., Goodwell—Panhandle Agricultural and Mechanical College, Albert W. Fanning, Pres., erect \$18,000 unit.

S. C., Charleston—Bd. of School Commrs., Geo. H. Moffett, Chmn., plans 3-story link between two wings of present building for library and study hall.

S. C., Jonesville—Jonesville School Dist. No. 12, C. A. Littlejohn, Sec., erect 2-story, brick school J. G. Cunningham, Archt., 201-A E. Coffee St., Greenville.

S. C., Kershaw—Bd. of Education receives bids May 23 for 2-story, brick, 6-classroom and auditorium school; Julian S. Starr, Archt., Rock Hill; following contractors estimating: W. T. Beauguard, Clover; J. Ed. Healan, Rock Hill; Southern Builders, Inc., Florence; R. E. Chewing & Son, Camden; T. C. Thompson & Bros., 600 N. Smith St., Charlotte, N. C.

Tenn., Chattanooga—Hamilton County Court authorized expenditure of \$111,900 for new buildings and improvements at Bonny Oaks Industrial School during next three years; program authorized for school based on estimates of R. H. Hunt Co., Archt., James Bldg., include addition and improvements to boys dormitory, \$5,500; improvements and addition to girls' dormitory, \$4,750; 1-story, brick dining hall to accommodate 135, \$10,800; 2-story, brick, girls' dormitory, \$15,500; 2-story, brick, boys' dormitory, \$14,600; central heating plant, \$8,000; convert building across street into classrooms, \$6,500; erect buildings for colored department to consist of girls' dormitory, \$12,500; boys' dormitory, \$18,000; dining hall, \$4,500; school building, \$8,000; cottages for help, \$2,750.

Tenn., Ooltewah—Hamilton County Bd. of Education, Jas. A. Cash, Commr., Chattanooga, having plans prepared by W. H. Sears, James Bldg., Chattanooga, for \$45,000, 1-story and basement, brick, stone trim school; comp. roof, auditorium-gymnasium and cafeteria.

Tex., Bellville—Bellville Ind. School Dist., reported, voted \$20,000 bonds.

Tex., Dalhart—Dalhart Ind. School Dist. voted \$30,000 bonds for 12-room, auditorium

and gymnasium East Ward School; H. A. Finch, Supt. of Schools; J. Roy Smith, Archt., Blackburn Bldg., Amarillo. 4-17

Tex., Del Rio—San Felipe Ind. School Dist., Santos Garza, Pres., erect \$40,000, 1-story, tile, stucco and conc. school; 55½x240 ft., T shape, auditorium 52x68½ ft.; Will N. Noonan Co., Archt., Bldrs. Exchange Bldg., San Antonio; bids in.

Tex., Georgetown—Southwestern University plans \$85,000 Cody Memorial Library Bldg.

Tex., Grand Saline—Grand Saline Ind. School Dist. voted \$50,000 bonds for 17-classroom school. 5-15

Tex., Greenville—City votes May 27 on \$15,000 bonds for improvements and additions to schools; L. C. Gee, Supt. of Schools.

Tex., Highland Park—Dallas—Highland Park School Bd., H. E. Gable, Supt., plans addition to Bradford School; probably erect additions to University Park and Armstrong Schools next year; \$150,000 bonds voted.

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., soon ready for bids for heating plants and equipment in 12 present schools; \$75,000; Phelps & Dewees, School Archts., Gunter Bldg.

Tex., San Benito—San Benito Ind. School Dist. Trustees have low bid at \$51,251 from Meriwether & Sauers, Harlingen, for 1-story, conc., brick and frame combination cafeteria and gymnasium; Phelps & Dewees, Archts., Gunter Bldg.; W. E. Simpson Co., Engrs., Milam Bldg., both San Antonio.

Tex., San Benito—San Benito Ind. School Dist. Trustees ready for bids about June 5 for \$175,000, 2-story, brick, stone and rein. conc. high school; Phelps & Dewees, Archts., Gunter Bldg.; W. E. Simpson Co., Engrs., Milam Bldg., both San Antonio. 4-17

Tex., Shiro—Shiro Ind. Dist. School Bd. having plans prepared by Marvin E. DeFee and Emory S. White, Merchants and Manufacturers Bldg., Houston, for school.

Va., Fredericksburg—Fredericksburg State Teachers' College receives bids May 27 for \$115,000 brick building to have 2 dining rooms, faculty dining room, tea rooms and space for laboratory for home economics department; plans by Charles M. Robinson Architects, Times-Dispatch Bldg., Richmond. 4-10

Va., Hillsville—Carroll County School Bd. erect 2-story, 16-classroom and auditorium school; auditorium and balcony to seat 500 people.

Va., Newport News—Bd. of School Trustees received bids May 24 for 6-room annex to high school and for installation of heating system; \$35,000.

Va., Petersburg—Virginia State College for Negroes ready for bids for agricultural building.

Va., Suffolk—Nansemond County School Bd., R. McWilliams, Supt., receives bids June 5 for 4-classroom school at Huntersville.

W. Va., Bluefield—State Bd. of Control, Henry N. Bradley, Pres., Charleston, receives bids June 10 for 2-story and basement, 44.6x29.2 ft., brick, president's residence at Bluefield Colored Institute; Garry & Sheffey, Archts., Bailey Bldg. 4-24

W. Va., Charleston—Charleston Ind. School Dist. Bd. of Education receives bids May 27 for 7-room school in Littlepage Addition; separate bids on general contract, plumbing and gasfitting; electric wiring; heating; plans from Warne, Tucker, Silling & Hutchisson, Archts., Masonic Temple.

W. Va., Charleston—Loudon Dist. School Bd., R. H. Dunn, Member, ready for bids for \$100,000, brick and stone high school at Marmet; 18 classrooms, gymnasium-auditorium to seat 1000 people; Wyson & Bengston, Archts., Professional Bldg. 3-6

W. Va., Charleston—Loudon Dist. Bd. of Education, R. H. Dunn, Member, receives bids June 3 for \$100,000, 18-classroom Jr. High School at Marmet; separate bids on heating; plans from Wyson, Bengston & Jones, Archts., Professional Bldg. 3-6

W. Va., St. Mary's—State Bd. of Control, Henry N. Bradley, Pres., Charleston, has plans by T. T. Sansbury, Parkersburg, for \$100,000 West Virginia state training school for feeble-minded near St. Mary's. 11-7

Stores

Ark., Little Rock—D. H. Rains erect \$10,000 brick business building, 618-20 W. Ninth St.

Ga., Savannah—Mangels, Inc., 23 E. Broughton St., erect store.

Ky., Cynthiana—Dennis Williams erect 2-story, brick business building, Pike and Walnut Sts.

Md., Baltimore—S. S. Kresge Co., Kresge Bldg., Detroit, Mich., erect \$45,000 store, 505-07 N. Gay St.

Md., Baltimore—Schoen & Co., Inc., 214 N. Charles St., leased 5-story building, Charles and Clay Sts. and 5-story building adjoining on Clay St.; having plans prepared by Lucius White, Court Square Bldg., and ready for bids about June 1, for remodeling interior for department store; 40x170 ft.; \$100,000.

Mo., Kansas City—W. R. Jewell, Chambers Bldg., has permit for \$10,000, 1-story building, 1201-03 E. 31st St.

Mo., St. Louis—Sam Rifkin, 5705 Delmar St., erect 50x100 ft. building, 7351-55 Forsythe Blvd.

Mo., St. Louis—W. J. Holbrook, Pres. of Holbrook-Blackwelder Real Estate Trust Co., 1010 Olive St., negotiating for 99-yr. lease of Bd. of Education Bldg., Ninth and Locust Sts.; plans erecting 3-story addition for offices of Bd. of Education and remodeling lower floors for sub-lease to Thomas W. Garland, Inc., 410 N. Sixth St. (ladies' ready-to-wear store).

N. C., Lexington—Dr. W. J. Vestal erect \$40,000 store and office building, Main St.; J. J. Sawyer, Archt., Jefferson Bldg., Greensboro.

N. C., Winston-Salem—Carolina Steel & Iron Co., Reynolds Bldg., complete building on Trade St. for stores, offices and storage space; \$10,000.

Okla., Chandler—O. R. Savage soon ready for bids for \$10,000, 1-story, 40x100 ft., brick store; A. C. Davis & Son, Archts., Shawnee.

Tenn., Chattanooga—John O. Fowler Furniture Co., Seventh and Broad Sts., soon ready for bids for improvements to store; install one passenger and one freight elevator, new front, lighting and heating, interior changes; R. H. Hunt Co., Archt., James Bldg.

Tex., Houston—J. Weingarten, Inc., 1502 Main St., erect \$75,000, 1-story, 52x115 ft. food-market store, Richmond and Loretto Sts.; Joseph Finger, Archt., Democrat Bldg.

Tex., San Antonio—Del Monte Development Co., Inc., Thos. T. Taylor, Maverick Bldg., erect 21 business buildings in connection with development 648-acre site in Zavalla County; W. N. Hagy, Archt., Maverick Bldg.; G. M. Jowers, Constr. Engr., Crystal City.

Tex., San Angelo—J. G. McCrory Co., 1107 Broadway, New York City, plans \$100,000 store.

Va., Richmond—O. D. Brinser, 1221 Decatur St., having plans prepared by H. Carl Messerschmidt, Mutual Bldg., for store, 208 E. Grace St.

BUILDING CONTRACTS AWARDED

Association and Fraternal

D. C., Washington—Plasterers and Cement Finishers Local No. 98 erect \$45,000 lodge hall, 1024 New Jersey Ave., N. W.; brick and conc., 1 story; A. B. Mullett & Co., Archts., Union Trust Bldg.; Jas. L. Parsons, Jr., Contr., 1427 I St., N. W.

Miss., Houston—Lodge No. 67, A. F. & A. M., let contract at \$11,750 to L. E. Tilghman, Derma, for temple.

Tex., Houston—Reagan Lodge Masonic Building Assn. let contract for \$110,000 temple, Harvard and 11th Sts., to Bace Construction Co., Post-Dispatch Bldg.; rein. conc. and steel, 4 stories, tar and gravel roof; Lamar Q. Cato, Archt., Bankers Mtg. Bldg. See Want Section—Building Material and Equipment. 4-3

Bank and Office

Ark., Hot Springs National Park—American Elevator & Machine Co., Jackson and Main Sts., Louisville, Ky., has elevator contract for \$1,000,000 Medical Arts Bldg., for B. M. Jackson, 111 W. Second St., Little Rock, and Jas. A. Rector, 208 N. Broadway, St. Louis, Mo.; Almand & Stuck, Archts., Boyle Bldg.; Gordon Walker, Contr., Pyramid Life Bldg., both Little Rock. 8-8

Mo., Kansas City—Kansas City Power & Light Co. let contract to Kansas City Structural Steel Co., Kansas City, Kansas, for struct. steel frame for 30-story office bldg.,

Theaters

Ark.-Tex., Texarkana—Saenger Theater, A. S. Watlington, Jr., Mgr., expend \$65,000 to install ice air cooling system; interior decoration and acoustical improvement to cost \$20,000.

Ga., Dawson—M. G. Lee selected Frank Lockwood, 119 Adams St., Montgomery, Ala., to prepare plans for 2-story brick theater.

Miss., McComb—Ellis Sarphie and others promoting erection of 3-story, brick and stone moving picture theatre on Broadway St.; 2 stores on first floor, office suites on second, roof garden and banquet hall on third; theatre to seat 1500 people.

Va.-Tenn., Bristol—Bristol Theatre Corp., W. P. Engel, Sec.-Treas., 1909 First Ave., Birmingham, Ala., receives bids May 26 for \$260,000, 2-story, 85x230 ft., rein. conc., struc. steel, brick and tile, stone trim theatre; cement and built-up roof, conc. and terrazzo floors; leased to Paramount-Lasky Corp., Paramount Bldg., New York.

Meyer & Engel, Southern Representative, 1909 First Ave., Birmingham; McDonald & Co., Archts.-Engrs., Southeastern Trust Bldg., Atlanta, Ga. See Want Section—Building Material and Equipment. 3-27

Va., Harrisonburg—Shenandoah Valley Theatres, reported, plans \$160,000 theatre on Court Square.

Va., Roanoke—Paramount-Publix Theaters Corp., Paramount Bldg., New York, Meyer & Engel, Southern Representatives, 1901 First St., Birmingham, Ala., organized Theatre Holding Co., Roanoke, of which William Engel, of Meyer & Engel, is Pres.; reported, erect \$500,000 theater in rear of Elks Club on Tazewell Ave.

Warehouses

La., Alexandria—Hill-Harris & Co., Inc., Thorn St., erect 2-story, rein. conc., brick and steel warehouse and office building.

Mo., Kansas City—Crooks Terminal Warehouses, 1104 Union Ave., plans \$250,000, 5-story, 162x120-ft. warehouse, Union Ave. and Santa Fe St.

Tenn., Greeneville—Jim Easterly and Linton Bewley, of Banner Warehouse, and others soon start work on tobacco warehouse on Andrew Johnson highway at Summer St.; steel, 50,000 sq. ft. floor space.

Tex., Dallas—State Highway Dept., Austin, erect 1-story, 50x120-ft. brick and steel warehouse on State Highway No. 6, ½ mi. from Dallas; bids in.

Tex., Houston—R. W. Collins and C. E. Naylor, of Naco Company, Esperson Bldg., announced plans for \$150,000, 5-story rein. conc. warehouse and office building, Broadway and Congress St.

Tex., San Marcos—Thomas Implement Co., Taylor Thomas, Pres. (local McCormick-Deering dealers), erect 40x80-ft. warehouse; plate glass front, conc. floor.

14th St. and Baltimore Ave.; structure \$2,500,000, 131x100 ft., 501 ft. high, 41-ft. penthouse surmounted by 87-ft. orna. tower above 30th floor; Holt, Price & Barnes, Archts., Telephone Bldg.; H. F. Freshman, company archt.; O. R. Bettis, company engr., both 1330 Grand Ave. 4-17

Okla., Oklahoma City—Jas. S. Gladish, 524 E. Ninth St., let contract to Chas. M. Dunning Construction Co., 420 ½ N. Hudson St., to remodel first floor of bldg., 401 N. Harvey St.; marble wainscot, terrazzo floors.

Tex., Fort Worth—Fort Worth National Bank, John Stanley, Mgr., install 7 high-speed elevators, dumb waiter and Venetian blinds; elevators, \$140,000, to Otis Elevator Co., 808 Taylor St.

Churches

La., Wisner—Methodist Church erect annex; contract let.

Md., Baltimore—Bethesda M. P. Church, Rev. G. M. Clayton, Pastor, 3008 Royston Ave., let contract to Sidney McCall, 3404 Marmon Ave., for \$42,000 bldg., Harford and Louise Aves.; stone, 2 stories and basement, 56x85 ft., slate roof, seat 225; classrooms, social rooms; later change into Sunday school; J. R. Forsythe, Archt., 16 E. Lexington St. See Want Section—Building Material and Equipment.

Miss., Meridian—St. Josephs R. C. Church let contract at \$11,250 to Lockard & Vaughan

for brick and stone trim bldg.; 1 story and tower, 32x75 ft., wood floors, steel and iron work, furnace; R. C. Springer, Archt., Rosendbaum Bldg. 5-8

Okla., Oklahoma City—Washington Ave. Baptist Church, Rev. E. P. Roe, Pastor, 601 W. Washington Ave., started work by day labor on brick addition; 1 story, 60x43 ft.

Tex., San Antonio—Baptist Temple, Jesse Yelvington, Pastor, 903 Drexel St., let contract for \$35,000 Sunday school, Drexel and Gevers Sts., to H. A. Miller, Builders Exch. Bldg.; brick, tile and rein. conc., 3 stories; Will N. Noonan Co., Archt., Builders Exch. Bldg.

City and County

Miss., Mendenhall—Simpson County Bd. of Supvrs., let contract to C. E. Westerfield, Mendenhall, for repairs to jail damaged by fire; stone trim, built-up comp. roof; Hull & Malvaney, Archts., Merchants Bank Bldg., Jackson. 4-17

Okla., Snyder—Town, Hugh McCaslin, Mayor, let provisional contract for \$10,000 town hall; 1 story, brick, conc. floors and foundation, built-up roof; R. F. Perkins, Engr., Altus. See Want Section—Building Material and Equipment. 5-15

S. C., Edgefield—Edgefield County Bd. of Commrs. let contract for \$33,000 addition to courthouse to Branch & Smith, 326 Walker St., Augusta, Ga.; brick and conc., 3 stories, 30x50 ft., conc. floors, conc. and brick foundation, slate and built-up roof; Elroy G. Smith, Engr., Herald Bldg., Augusta; work started.

Tex., Littlefield—City started work on \$35,000 city hall; Albert Neuschwander, Contr.

Tex., Taylor—City started work on West End fire station.

Va., Marion—Smyth County Bd. of Supvrs. let contract at \$16,100 to Roanoke Bridge & Iron Works, Roanoke, for steel work for jail remodeling and enlarging; masonry work, J. C. Kinsolver, Bristol, at \$6790; Stone & Stone, Archts., Bristol. 5-1

Dwellings

Ala., Birmingham—W. T. Roddey, Brown-Marx Bldg., erect brick residence, Mt. Brooke Estates; 2 stories, 34x72 ft., tile roof, steam heat; Woolard & Lynch, Contrs., 2115 N. First Ave.

D. C., Washington—Chas. D. Sager, 924 Fourteenth St., N. W., started work on 11 brick dwellings, 511-31 Twenty-third Place, N. W.; 2 stories, 16x30 ft., oak floors, slag roofs; Geo. T. Santmyers, Archt., 14th and 1 Sts.; owners build.

D. C., Washington—John W. Davidge, 2146 Wyoming Ave., N. W., completed foundation for \$130,000 residence, 2825 Rock Creek Drive; brick, stone and conc., 3 stories, 168x45 ft., wood floors, slate and copper roof; Wyeth & Sullivan, Archts., 16 Jackson Place, N. W.; M. S. Rich, Engr., 1427 I St., N. W.; Andrew Murray, Contr., 729 Twelfth St., N. W. 5-15

Fla., Clearwater—Dr. F. B. Bayview erect \$15,000 residence by day labor; stone veneer, 2 stories, 60x50 ft., oak floors, tile roof; Frank Frimmer, Archt., Dunedin.

Fla., Clearwater—Harvey Meyers, Covington, Ky., erect \$10,000 residence, Belleair Estates; stucco and hollow tile, 2 stories; Jonsberg & Wakeling, Archts., Coachman Bldg., Clearwater, and St. Petersburg; Geo. Eichelberger, Contr.

Fla., Fort Lauderdale—Chas. M. Brooks, Greenwich, Conn., and 107 Thomas St., New York, erect \$10,000 residence, Rio Vista Blvd.; Spanish type, stucco and frame, 1 story, 3 baths; Hart & Johnson, Contrs., Fort Lauderdale.

Fla., Lakeland—H. B. Trauger, Cleveland Heights, remodel and enlarge residence; stucco and tile, 2 stories, 62x40 ft.; day labor.

Fla., Miami Beach—W. F. Snyder, Contr., 8038 Harding Drive, reported, erect residence

Fla., Miami Beach—S. T. Corydon, 5900 Kenmore Ave., Chicago, Ill., let contract to J. P. Nielsen, 55 N. E. 46th St., Miami, for \$16,000 residence and garage, Jefferson Ave. and 19th St.; rein. conc., conc. block and stucco, 1 story, tile and wood floors, tile and comp. roof; Carlos B. Schoeppl, Archt., 528 Lincoln Rd., Miami Beach; John & Coulton Skinner, Asso. Archts., French Village, Le Jeune Rd., Coral Gables, Miami. 5-15

Fla., Miami Beach—Geo. Mead, 5666 Collins Ave., has permit for \$10,000 addition to residence; Mead Construction Co., Contr., 1659 Lenox Ave.

Fla., Miami Beach—Fred L. Hoerger, care Fisher Properties, erect \$15,000 residence and garage, 6444 Collins Ave.; rein. conc., conc. block and stucco, 35x50 ft., tile and other floors, tile and comp. roof; plans by R. M. Appleget; day labor.

Fla., Miami Beach—B. H. Kohn, care Miami Show Case & Fixture Co., 228 S. Miami Ave., erect \$10,000 bungalow and garage, 944 Meridian Ave.; rein. conc., conc. block and stucco, 32x55 ft.; Alfred F. Schimek, Archt., Congress Bldg., Miami; day labor.

Fla., Palm Beach—L. E. Cofer let contract to J. S. Willson Co., 604 S. Olive St., for \$50,000 residence, Barton Ave.; Treanor & Fatio, Archts., Phipps Plaza.

Fla., Palm Beach—Henry G. Barkenhausen, Singer Place, plans 2-story dwelling, Via Del Mar; Treanor & Fatio, Archts., Phipps Plaza.

Fla., Palm Beach—Edw. E. B. Adams, care E. F. Hutton Co., Breakers Bldg., erect \$10,000 residence, El Bravo Way; Smith & Riddle, Constr. Engrs., Lake View Arcade, in charge of lake front development; Majorian type, stucco and Quarry Key stone, 2 stories, wood, tile and stone floors. Cuban tile roof; Volk & Maass, Archts., 11 Plaza Bldg.; Arnold Construction Co., Contr., Murray Bldg., all Palm Beach. 5-15

Ga., Atlanta—J. S. Storm, 518 Fourteenth St., N. W., erect \$10,000 residence, Pelham Rd.; English type, brick veneer, 1 story, 36x52 ft.; J. M. McPherson, Archt., 646 Maryland Ave.; owner builds. See Want Section—Building Material and Equipment. 5-15

Ga., Atlanta—Mrs. Florence S. Cannon, let contract at \$13,334 to S. G. Walker, Hapeville, for residence; brick veneer, 1 story and basement, 80x35 ft., hardwood and tile floors, comp. roof; R. S. Monday, Archt., Norris Bldg. 5-8

Ga., Atlanta—Mrs. J. R. Kidder, 26 Peachtree Way, N. E. let contract to J. B. Hiers, 425 Ridgcrest Rd., for \$30,000 brick residence; 2 stories and basement, Buckingham slate and comp. shingle roof, conc. footings, 105x48 ft., irregular, cement, tile and hardwood floors; Burge & Stevens, Archts., 101 Marietta St. 5-8

Ga., Atlanta—Jacobson Plastering Corp., Candler Bldg., has lathing and plastering contract for \$60,000 residence for Mrs. Jas. J. Goodrum, 33 11th St., N. E.; Hentz, Alder & Shute, Archts., Candler Bldg.; Collins, Holdbrook & Collins, Contrs., Atlanta Tr. Bldg.; Jacobson corporation also has similar contract for office bldg. for John P. King Manufacturing Co. at Augusta, Ga.; Scroggs & Ewing, Archts., S. F. C. Bldg.; J. B. Mobley, Contr., both Augusta. 10-21 and 3-27

Ga., Monroe—E. S. Tichnor let contract to A. K. Adams Co., 542 Plum St., for brick veneer residence; 2 stories and basement, conc. footings, hardwood and tile floors, tin roof; Warfield & Keeble, Archts., Nashville Tr. Bldg., Nashville, Tenn. 4-24

La., New Orleans—H. M. Johnson, Contr., 1929 Painters St., erect 2 frame double dwellings, Sage St., near Franklin St.

La., New Orleans—A. D. Leopold erect double residence, Belfast and Dante Sts.; asbestos roof; M. Maitman, Contr., both 1524 Baronne St.; subs in about 30 days.

La., New Orleans—W. J. Campbell, 1141 Baronne St., erect single raised residence, tile roof; E. West, Contr., 7602 Zimple St. 425 Exposition Blvd.; brick, rein. steel, tile.

La., New Orleans—Mrs. Sorrell erect single residence, 4922 Clara St.; W. A. Norfleet, Contr., 1331 Hillary St.

La., New Orleans—W. S. Lyon, 1001 Lafayette St., erect single residence, Bodenger Blvd. near Magellan St.; Philip Schneller, Contr., 4141 Orleans St.

Md., Baltimore—Cottage Realty Co. erect 3 frame dwellings, 5201-05 Pembroke Ave.; 2½ stories, 20x26 ft., steam heat; \$10,000; Benj. R. Sale, Contr., 4311 Arizona Ave.

Md., Baltimore—John L. Tregellas, 10 E. Fayette St., erect \$10,000 dwelling, 209 Longwood Rd.; brick and block, 2 stories, 40x30 ft., slate roof, hot water heat; Cyril H. Hebrank, Archt., 3 E. Lexington St.; owner builds.

Md., Baltimore—Donohue Home Building Co., Ashland and Kenwood Aves., erect 38 brick dwellings, 1-75 N. Monastery Ave., after plans by J. J. Murphy; 2 stories, 15.2x37 ft., Carey roofs, hot water heat; \$76,000; owner builds. 4-17

Md., Chevy Chase, Branch Washington, D. C.—Shannon & Luchs, 1435 K St., N. W., erect 6 dwellings and garages, Maple Ave.;

brick, 2½ stories; A. B. Heaton, Archt., 1211-A Connecticut Ave., N. W., both Washington; owners build.

Mo., Clayton, St. Louis—R. A. Bullock, and others, 1106 Fullerton Bldg., erect \$12,000 dwelling, 807 Bemiston St.; stone foundation, slate roof, hot water heat; Wm. W. Sapin, Archt., 5816 Enright St.

Mo., Clayton, St. Louis—A. Ottenad, 4056 Cleveland St., erect \$10,000 residence, 932 Moorlands Drive; brick, 2 stories, 36.6x27 ft., conc. foundation, slate roof, hot water heat; John Wunderlich, Archt., 4930 Tholoan St.; A. Sprenguether, Contr., 5500 Lisette St.

Mo., Clayton, St. Louis—M. E. Zeppenfeld erect \$12,000 residence, Davis Drive; 2 stories, 38x39 ft., stone foundation, cement shingle roof, hot water heat; Zeppenfeld, Inc., Archt.-Contr., both 3905 Utah Place.

Mo., Clayton, St. Louis—Mrs. H. A. Wollen, 4056 Cleveland St., erect \$12,000 residence, 936 Moorland Drive; 2 stories, 42.6x29 ft., conc. foundation, slate roof, hot water heat; John Wunderlich, Archt., 4930 Tholoan St.; A. Sprenguether, Contr., 5500 Lisette St.

Mo., Kansas City—M. C. Burns, 2608 Benton St., soon start work on English type residence, Tomahawk Rd.; first floor brick, second half timber and shingle, 2 baths; Davidson & Schwindler, Archts.

Mo., St. Louis—Dr. M. L. Heideman, Metropolitan Bldg., let contract to Kremer-Voiron Construction Co., Chemical Bldg., for \$35,000 residence, Hampton Park, St. Louis County; brick, 3 stories, 68.6x40 ft., hardwood floors, conc. foundation, slate roof; G. W. Wolf, Archt., 776 E. Big Bend Rd., Webster Groves; excavation completed. 5-8

Mo., St. Louis—Philip Construction Co., 4919 Lotus St., erect 4 brick dwellings, 5037-49 W. Park St.; 1 story, 25x32 ft., comp. shingle roofs, hot air heat; \$12,800; plans by Saum Architects, 713A Market St.; owner builds.

Mo., St. Louis—G. L. Kirsch, 2407 N. Broadway, erect \$10,000 brick residence, 8761 Partridge St.; 2 stories, 42x54 ft., comp. roof, hot water heat; O. Kuhatzky, Archt.; O. K. Investment Co., Contr., both 8800 Kingshighway.

Mo., St. Louis—G. Muccigrosso, 2921A Belt St., erect \$15,000 residence, 5435 Bartmer St.; brick, 2 stories, 30x36 ft., slate roof, hot water heat; B. Shapiro, Archt., Synd. Tr. Bldg.; A. J. Muccigrosso, Contr., 6535 Olive St. Rd.

Mo., St. Louis—Audrey Realty Co., Wainwright Bldg., erect 2 brick dwellings, 5614-18 Finkman St.; 1 story, 25x44 ft., comp. roofs, hot air heat; \$10,000; V. Stamm, Contr., 5917 Hampton St.

N. C., Greensboro—S. T. Oliver and D. C. Wright, 502 Woodlawn Ave., erect brick veneer dwelling, 705 Englewood Ave.; 1 story and basement, 43x30 ft., pine and hardwood floors; constr. by Mr. Oliver.

N. C., Shelby—Mrs. Colin Hull erect 2-story brick residence, Lee and Lafayette Sts.; D. A. Branton, Contr.; work started.

N. C., Shelby—R. L. Weathers, member, Bd. of County Commrs., erect brick residence, site burned structure, N. Lafayette St.; Cicero Lutz and David Webb, Contrs.

N. C., Greensboro—John R. Hughes, 1715 Asheboro St., erect frame residence; 1 story and basement, 38x28 ft., hardwood and pine floors; day labor.

Okla., Weatherford—T. F. Cooley erect \$10,000 residence; brick veneer, 2 stories and basement, 30x35 ft.; W. J. Laws & Co., Archts., First Natl. Bk. Bldg., Oklahoma City; day labor.

Tex., Fort Worth—Byrne & Luther, Inc., Bldrs.-Developers, Fort Worth Nat'l Bank Bldg., erecting \$50,000 model dwelling, Westover Hills, for Star-Telegram; brick veneer, half timber and stucco, 2 stories and basement, 130x39 ft., conc. foundation, wood roof; Victor Marr Curtis, Archt., 5444 Byers Ave. See Want Section—Building Material and Equipment. 5-8

Tex., Galveston—T. L. Cross, 3011 O St., erect brick veneer residence, 3001 Broadway; R. S. Boney, Contr.

Tex., Houston—Hayes & Orem, 833 Yale St., erect \$12,000 residence, 3227 Avalon Drive; brick veneer, 2 stories, 8 rooms.

Tex., San Antonio—Ed H. Knowlton, care L. Harrington Co., Archt.-Engr., let contract at \$14,840 to F. A. Nunnally, both Builders Exch. Bldg., for residence; English type, rock veneer, 2 stories, 2 baths, 10 rooms, oak and tile floors. 5-1

Va., Norfolk—Ralph Cruser erect residence, Colley Ave. and 53rd St.; W. T. Gregory, Contr., Law Bldg.

Va., Richmond—J. D. Lindsay completed excavation for \$10,500 residence, West Hampton; 2 stories, about 40x26 ft., oak floors, brick foundation, slate roof; Courtney S. Welton, Archt., Grace American Bank Bldg.; B. W. Showalter, Contr., 2820 Hawthorne Ave.

Va., Virginia Beach—A. H. Callow erect residence; Geo. L. Hayes, Contr., 2110 St. Dennis Ave., Norfolk.

Government and State

D. C., Washington—Howard P. Foley Co., Inc., 2020 I St., N. W., has signal system contract at \$37,350 for \$10,000,000 Bureau of Internal Revenue building. 5-15

Ga., Atlanta—Following sub-contracts let on \$200,000 remodeling work on State Capitol: Rein. steel, Kalman Steel Co., Candler Bldg.; interior partitions, Southern Fireproofing Co., 161 Spring St., N. W.; marble, Georgia Marble Co.; terrazzo, A. M. Fornara Co., both Bona Allen Bldg.; rubberstone floors, Southern States Insulating Co., Candler Annex; cabinet work, J. P. Womack & Son, Lakewood; millwork, Phoenix Planing Mill Co., 719 Highland Ave., N. E.; painting, William Wilson Co., Bona Allen Bldg.; glass and glazing, F. J. Coolegde & Sons, 12 Forsyth St., N. W.; elect. work, Courson & Hitt; plumbing, S. S. Shepard Plumbing Co., all Atlanta; metal base, Knapp Bros. Manufacturing Co., 605 W. Washington Blvd., Chicago, Ill.; Edwards & Sayward, Archts.; Robt. B. Logan, Asso. Archt., both 101 Marietta Bldg.; A. K. Adams & Co., Contrs., 542 Plum St., N. W. 4-3

Ga., Savannah—Artley Co., 504 E. Bay St., has contract to remodel upper floors of Georgia Savings Assn. bldg. for Federal offices; Cletus W. Bergen, Archt., Liberty Bank & Trust Bldg.

N. C., Lenoir—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., let contract at \$55,800 to Murphree Pound, Columbus, Ga., for post office, including mechanical equipment. 5-15

Hospitals, Sanitariums, Etc.

D. C., Washington—Gray Ladies, Red Cross Bldg., Army Medical Center, let contract at \$54,900 to DeSibour Construction Co., 1200 Fifteenth St., N. W., for chapel; limestone and granite, 2 stories, 50x113 ft., conc. floors, conc. and stone foundation, slate roof; plans by War Dept., Q. M. Corps, Munitions Bldg. 4-24

Fla., Panama City—Dr. J. M. Whitfield and Dr. Don S. Frazier started work on \$20,000 hospital, Harrison Ave. and 13th St.; thirty 9x12-ft. patients' rooms and operating room on second floor; elevator; 2 entrances.

Ky., Lexington—Worsham Bros., Empire Bldg., Knoxville, Tenn., have smokesack contract for \$1,500,000 U. S. Veterans Hospital; National Construction Co., Inc., Gen. Contr., Glenn Bldg., Atlanta, Ga. 5-18

Tenn., Brownsville—Haywood County Hospital Bd. of Trustees let contract for \$76,000 hospital to Consolidated Contractors, Farnsworth Bldg., Memphis; fireproof, steel joist, conc., 3 stories, 44x110 ft., terrazzo and tile floors, rein. conc. foundation, built-up roof over conc.; address proposals on furnishings, equipment, etc., \$30,000, to Estes W. Mann, Archt., Cotton Exch. Bldg., Memphis. See Want Section—Building Material and Equipment. 5-15

Tenn., Nashville—R. H. Lyle, Commr. of Institutions, Memorial Bldg., let contract to Worsham Bros., Empire Bldg., Knoxville, for foundation for \$150,000 hospital for criminal insane, Central State Hospital; Marr & Holman, Archts., Stahlman Bldg. 5-1

Tex., Galveston—Kimball Bros. Co., Council Bluffs, Iowa, has contract at \$6950 for elect. passenger elevator and 1 elect. dumbwaiter, U. S. Marine Hospital; Ring Construction Co., 85 S. 11th St., Minneapolis, Minn., has gen. contract at \$506,900. 5-15

Tex., Houston—Ladies Assn. of First Presbyterian Church let contract to Don Hall, Cotton Exch. Bldg., for \$15,000 ward bldg., Tuberculosis Hospital; conc., tile and stucco, 1 story, 170x17 ft., wood floors, conc. foundation, tile roof; J. W. Dehnert, Archt., Esperson Bldg. See Want Section—Building Material and Equipment. 5-15

Tex., Palestine—Speegle Sanitarium erect \$18,000 addition; brick and stucco, 2 and 3 stories, 35x72 ft., tile roof; Theo. Maffitt, Archt.; Fred Jones, Contr.

Tex., Terrell—State Bd. of Control, Austin, has low bid at \$68,950 from J. O. Everett & Co., 1909 N. Harwood St., Dallas, for improvements to 2 ward bldgs., Terrell State Hospital.

Hotels and Apartments

Fla., Miami Beach—Martha Meyer, 2036 N. W. First Terrace, Miami, erect \$10,000, 2-story, 34x42 ft., rein. conc. conc. block and stucco, 4-apartment, Michigan Ave. and 4th St., Ocean Beach subdivision; V. H. Nellenbogen, Archt., 925 Lincoln Road, Miami Beach; owner builds, Chas. Meyer, Supt. of construction.

Mo., Clayton, St. Louis—The Herman Mayer Co., Fullerton Bldg., St. Louis, has contract for \$400,000, 6-story, brick, 18-apartment, Clayton Blvd. and Westwood Drive, for Clayton Investment Corp., 634 N. Grand Ave.

Mo., Poplar Bluff—Preston J. Bradshaw, Archt., 718 Locust St., and Boaz-Kiel Construction Co., 1409 N. Seventh St., both St. Louis, promoting erection of \$450,000, 8-story, 104x67 ft. hotel.

Mo., St. Louis—Edw. J. Michel, 3334 Itaska Ave., let contract to Ruhaack & Co., 2623 Texas Ave., for \$18,500, 2-story, brick, 4-apartment, 3236 Itaska Ave.

Mo., St. Louis—Emil C. Fendler, 6220-A Oakland Ave., has contract for \$65,000, 3-story, brick, 15-apartment.

Mo., University, St. Louis—Central Holdings Co., 811 N. Sixth St., erect \$27,500, 2-story, 55x72-ft. brick tenement, 825 Midland St.; stone foundation, tile roof, steam heat; Caplan McGowan, Bldr.; B. Shapiro, Archt., Synd. Trust Bldg.

Tenn., Nashville—Benz-Hicks Realty Co., Noel Block, erect \$75,000, 2-story and basement, brick, stucco and frame Sharondale Terrace Apartments on Hillsboro Road; English design, slate or tile roof, oil heat, electric refrigeration, hardwood and tile floors; Tisdale & Pinson, Archts., Independent Life Bldg.; owner builds.

Tex., Madisonville—Northern Construction Co., Union Natl. Bank Bldg., Houston, has contract to erect \$52,000, conc. and hollow tile, 20-room hotel for H. B. Houston; R. C. Smallwood, Archt., Esperson Bldg., Houston.

Va., Norfolk—W. H. Mathews, Boissevain Ave., erect \$35,000 6-apartment on Brandon Ave.; Johnson Construction Co., Contr., Washington and High Sts.

Va., Norfolk—Selmor Realty Corp., H. H. Fisher, Pres., 940 Gates Ave., completed foundation for \$120,000, brick, and hollow tile, fireproof, 18-apartment in Washington Park near Colley Ave.; J. E. Barclay, Archt., Contr.

Miscellaneous

Fla., Miami Beach—Indian Creek Golf Club, R. F. Mathews, 5700 Sheridan Ave., let contract to St. John Construction Co., 629 N. W. 7th St., Miami, for \$13,900 equipment building on island in Biscayne Bay west of 92nd St.; \$13,900; Robert A. Taylor, Archt., Spanish Village, Miami Beach. 3-13

Fla., St. Petersburg—George A. Fuller Co., Contr., 507 Madison Ave., New York, acquired Jungle Hotel and golf course; build clubhouse and make other improvements.

Mo., St. Louis—Theatre Realty Co., 519 N. Grand Blvd., soon start work on remodeling restaurant to be leased to John R. Thompson Co., care R. King Kaufman, 350 N. Clark Ave., Chicago, Ill.; W. F. Kaahl, Contr., 350 N. Clark Ave., Chicago; Preston J. Bradshaw, Archt., 718 Locust St., St. Louis.

Tex., San Antonio—K. C. Baker erect number rock buildings on farm 10 miles out on Fredericksburg Road; John Westerhoff, Contr., Milam Bldg.

Va., Virginia Beach—Princess Anne Woman's Club, Mrs. Rufus Parks, Chmn., Bldg. Comm., let contract to E. E. Weedle & Co., Board of Trade Bldg., Norfolk, for 1-story, frame clubhouse at Übermeier; Rudolph, Cooke & Van Leeuwen, Archts., Arcade Bldg., Norfolk. 5-15

W. Va., Bluefield—Bluefield County Club let contract to Clarence Heldreth, Tazewell, Va., for \$10,000 swimming pool; Alex Mahood, Archt., L. C. Bldg.

Schools

Ala., Tusculum—School Bd. soon start work, probably day labor, on 2-story brick grammar school; 12 classrooms, auditorium to seat 400 people; Sam C. Molloy, Archt., Birmingham.

Ala., Auburn—Alabama Polytechnic Institute, Dr. Bradford Knapp, Pres., started work on \$184,448, 2-story and basement, 300 x60 ft., rein. conc., struc. steel, brick and tile Engineering Bldg.; W. L. Coston & Son, Contrs., Bessemer; equipment to be installed by Textile Engineering students under Prof. E. W. Camp; Warren, Knight & Davis, Archts., Protective Life Bldg., Birmingham. 3-27

Ala., Marbury—Autauga County Bd. of Education, Prattville, erect \$21,000, brick, 6-classroom and auditorium high school; asbestos roof, auditorium to seat 400; J. L. Crawford, Contr., Clanton.

Ark., Cecil—School Bd., Dist. No. 100, Charles G. Andrews, Sec., let contract to J. J. Valentine, Morrilton, for \$13,000, 1-story, 55x131 ft. brick school. See Want Section—Building Material and Equipment. 4-24

Ark., Vilonia—Vilonia School Dist., J. B. Munn, Pres., soon start work on \$20,000, 1-story, brick veneer school; Homer Stewart, Contr., Conway; plans by State Dept. of Education, Little Rock.

Ark., El Dorado—Union County Bd. of Education, J. L. Bond, Supt., let contract at \$26,965 to Hardy Construction Co., Texarkana, Tex., for 1-story, 125x130 ft., brick veneer school in Rural Special School Dist. No. 2; Hunter & Boyd, Archts., Armstrong Bldg., El Dorado.

Ark., Little Rock—School Bd., W. N. Brandon, Pres., let contract at \$28,000 to McGregor & Pickett, A. O. U. W. Bldg., for 2-story, brick and conc. addition to Forrest Park School; Thompson, Sanders & Ginocchio, Archts., Hall Bldg.

D. C., Washington—District Commrs., 509 District Bldg., let contract at \$452,500 to W. P. Rose Co., Wayne Natl. Bank Bldg., Goldsboro, N. C., for 3-story, brick, Charles Wm. Elliot Jr. High School; A. L. Harris, Municipal Archt. 5-1

Fla., Highland City—Polk County Bd. of Public Instruction, Bartow, started work on 1-story, 38x167 ft., brick grammar school for which Albion Co., Bartow, has contract at \$20,511; auditorium 40x70 ft.; wood floors, asbestos roof; Arch D. Holsinger, Archt., Bartow. 5-15

Fla., Gainesville—Florida State Bd. of Control, P. K. Yonge, Chmn., Carling Hotel, Jacksonville, let contract at \$32,200 to Keller Construction Co., Atlantic Natl. Bank Bldg., Jacksonville, for addition to administration building at Florida School for Deaf and Blind, St. Augustine; at \$29,000 to O. P. Woodcock Construction Co., Lutz Bldg., Jacksonville, for first unit of laboratory building at Everglades Experiment Station, Belle Glade; at \$4732 to McClane Construction Co., Maddox, Ga., for experimental refrigeration plant at University of Florida, Gainesville; Rudolph Weaver, Peabody Hall, Gainesville. 5-8

Ga., Atlanta—Stuart Witham, Andrews Drive, let contract to Joseph S. Shaw, Georgia Savings Bank Bldg., for store on Peachtree St. at Peachtree Place, N. E.; one story and basement, 85x60 ft., brick, stone trim, struc. steel, built-up roof; excavation started; McDonald & Co., Engrs., Southeastern Trust Bldg.

Md., Baltimore—Following sub-contracts awarded on 3-story annex with separate 1-story auditorium, and alterations to present buildings of Baltimore Polytechnic Institute for which J. Henry Miller, Inc., Eutaw and Franklin Sts., has general contract at \$879,700: Steel, 500 tons, Dietrich Bros., 220 Pleasant St.; painting and glazing, Hurlburt & Hurlburt, 403 N. Charles St.; electric work, Blumenthal-Kahn, 518 N. Charles St., all Baltimore; millwork, Oettinger Lumber Co., S. Elm St., extended, Greensboro, N. C.; glass, Pittsburgh Plate Glass Co., Grant Bldg., Pittsburgh, Pa.; terra cotta, Federal-Seaboard Terra Cotta Corp., 10 E. 40th St., New York City; Chas. M. Anderson, Archt., 9 E. Pleasant St. 4-17

Md., Hagerstown—Washington County Bd. of Education, C. Bell, Pres., erect \$132,900, 2-story, 235x120-ft., brick, fireproof, Jr. High School, Woodland Ave.; A. J. Klinkhart, Archt., Kohler Bldg., Hagerstown; W. H. Miller, Contr., Williamsport, Md. 4-3

Md., Salisbury—Wicomico County School Commn., E. Riall White, Chmn., let contract to Cogswell Construction Co., 406 Park Ave., Baltimore, for \$300,000, 3-story, 130x249 ft., rein. conc., brick, steel, stone high school; Smith & May, Archts., Calvert Bldg.; James Posey, Consit. Engr., Baltimore Trust Bldg., both Baltimore. 3-20

Miss., Greenville—Mississippi School Supply Co., Jackson, has contract at \$12,888 for furniture and part of furnishings for \$225,000 E. E. Bass Jr. School under construction; Sandquist & Snow of Miss., Inc., Gen. Contrs., Guaranty Bank Bldg., Alexandria, La.; N. W. Overstreet, Archt., Miss. Fire Insurance Bldg., Jackson. 9-26

Mo., Moberly—Bd. of Education, R. F. Self, Sec., let contract at \$174,212 to Peterson Construction Co., Pioneer Trust Bldg., Kansas City, for 2-story and basement, 120x64 ft., brick, stone and rein. conc. Junior College and Senior High School; heating,

\$26,505, John P. Beuth; plumbing, \$16,165, Wieman Brothers; wiring, \$7000, Holt Electric Co.; Ludwig Abt, Archt., Reigel, Archt. 5-8

N. C., Marion—McDowell County School Bd. let contract at \$9160 to Hicks Hill, Spindale, for 6-room addition and improvements to Glenwood High School. 4-10

Okla., Wynoka—Bd. of Education let contract at \$21,400 to J. W. Wilson, Maud, for 11-classroom grade school; Roy W. Shaw, Archt., Enid. 5-15

Okla., Oklahoma City—Bd. of Education, J. G. Stearley, Clk., let contracts as follows on three school additions and 3 school buildings: Two-story, 16-room Heronville Grade School, \$86,000, and Shields Heights School, \$67,000, Santee & Lashley; 3-story, 127x32-ft., 8-room Hawthorne School addition, \$67,200, Barbour & Short; 1-story, 55x88-ft. and 3-story, 95x40-ft. additions to Capitol Hill Jr. High School, \$63,533; 2-story, 62x114-ft., 11-classroom Lee School addition, \$55,892, and University Heights School addition, \$41,979, C. M. Dunning, 420 1/2 N. Hudson St.; all rein. conc., brick and stone; Layton, Hicks & Forsythe, Archts., Braniff Bldg. 5-15

S. C., Columbia—Bd. of Education let contract at \$37,400 to Lupo & Holcombe, 637 Elmwood St., for brick Wayne Street School; J. B. Urquhart, Archt., Columbia Natl. Bank Bldg. 5-15

N. C., Mount Airy—School Bd., L. B. Pendergraph, Supt., let contract at \$19,500 to J. O. Connor & Son, 432 Washington St., High Point, for brick school building; comp. roof; Northrup & O'Brien, Archts., Reynolds Bldg., Winston-Salem. 5-1

Tenn., Birchwood—Hamilton County Bd. of Education, Mrs. Harry Lacey, Chmn., Chattanooga, let contract at \$32,961 to E. G. Maxwell, Peach Blossom Road, Chattanooga, for 1-story and basement, brick grammar and high school; comp. roof, stone trim Maxwell James and Gordon L. Smith, Archts., Provident Bldg., Chattanooga. 4-24

Tenn., Memphis—Bd. of Education, G. W. Garner, Sec., let contract at \$19,989 to Memphis Construction Co., 160 Union Ave., for 1-story, 95 1/2 x44 ft., brick and conc., fireproof addition to Leroy Pope School; H. J. Kramer, Archt., Goodwyn Institute Bldg. 4-17

Tenn., Johnson City—Bd. of Education let contract at \$41,600 to Marshall Construction Co., for addition to Johnson City High School. 4-19

Tex., Columbus—Columbus Ind. School Dist. Bd. of Trustees, J. A. Kearney, Pres., let contract to A. N. Evans for \$16,000, 2-story, brick and rein. conc. addition to school and repairs to other schools; Marvin E. De Vee and Emory S. White, Archts., Merchants and Manufacturers Bldg., Houston. 5-8

Tex., Fairfield—Fairfield Ind. School Dist., P. D. Browne, Supt. of Schools, let contract to A. W. Fowlkes, Temple, for \$28,000, 1-story, brick and rein. conc. addition to school.

Tex., Gonzales—Gonzales Ind. School Dist. Bd. of Trustees let contract at \$30,557 to E. H. Page, Laredo, for 1-story, brick, fireproof, 7-classroom and assembly hall grade school; Will N. Noonan Co., Archt., Builders Exchange Bldg.; W. E. Simpson Co., Engr., Milam Bldg., both San Antonio. See Want Section—Building Material and Equipment. 5-8

Tex., Groveton—Groveton Ind. School Dist. Trustees let contract at \$27,000 to C. E. Jopling, Wharton, for 1-story, frame, and brick veneer, 12-classroom school; Louis P. Josseland, Archts., First Natl. Bank Bldg., Houston. 5-1

Tex., Mason—Mason Ind. School Dist., O. A. Huff, Pres., let contract at \$12,185 to Drew & Brooks Construction Co., Lometa, for 4-classroom, basement and auditorium, stone and frame addition to grade school; Will N. Noonan Co., Archt., Bldrs. Exchange Bldg., San Antonio. 5-8

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., let contract at \$27,233 to C. H. Blount, Houston Bldg., for 2-story, 96x37 ft., brick, tile and rein. conc. Joel Chandler Harris Jr. High School; comp. and wood floors, slate roof; Roy K. Hamberlin, Archt., Builders Exchange; Beretta-Stiles Co., Inc., Engrs., Natl. Bank of Commerce Bldg. 5-8

Va., Atkins—Smyth County School Bd., Marion, let contract at \$25,920 to Joseph Feazell, Bristol, for brick school; auditorium and 7 classrooms, accommodating 300 pupils. 5-1

Va., Harrisonburg—State Teachers College, Dr. S. P. Duke, Pres., let contract to Nielsen Construction Co., Harrisonburg, for \$200,000, 3-story, stone, fireproof administration

building; contain administrative offices, classrooms, auditorium to seat 1500 people; plans by Charles M. Robinson, Architects, Times-Dispatch Bldg., Richmond. 5-8

W. Va., Romney—Romney Dist. Bd. of Education let contract at \$43,500 to M. W. Zinn, 810 Second St., Huntington, for high school; Frampton & Bowers, Archts., 414 Eleventh St., Huntington. 3-13

Stores

Ark., Rogers—C. A. Miller soon start work on \$15,500, 2-story, 50x125 ft., brick and conc. business building, S. Second St.; comp. built-up roof, wood floors; Kyle Fraser, Contr., Springdale.

Fla., Miami Beach—J. C. Devine Properties, Inc., 1337 Collins Ave., erect \$18,000, 1-story, 100x60 ft., rein. conc., and conc. block and stucco, 5-stone, metal and tile Washington Ave.; cast stone metal and tile fronts, comp. roof; owner builds, day labor; E. L. Robertson, Archt., Calumet Bldg., Miami, taking sub-bids. 5-8

Md., Baltimore—J. Holliday Reipt has permit for \$10,000, 1-story, 68x76 ft. brick building, 5615-21 York Road; slate roof, hot air heat; The J. Raymond Gerwig Co., Inc.,

Bldr., 213 St. Paul St.; T. Worth Jamison, Jr., Archt., 12 E. Pleasant St.

N. C., Lexington—C. U. G. Beisecker let contract to L. S. Costner, Cherryville, for 1-story, 52x70 ft., brick store on W. Second Ave.

N. C., Raleigh—S. H. Kress & Co., 114 E. Fifth Ave., erect \$100,000 store; 2 stories and basement, fireproof; U. A. Underwood, Inc., Contr., Murchison Bldg., Wilmington.

Okla., Shawnee—W. B. Emery soon start work on \$12,000, 2-story, 40x60 ft. store and apartment; owner builds by separate contracts.

Tenn., Knoxville—Mynatt Estate, E. F. Mynatt, 2306 N. Broad St., reconstructing Mynatt Bldg., recently damaged by fire; Emory Construction Co., Contr., Empire Bldg. 4-3

Tex., Houston—General Properties Co., Oscar F. Holcombe, Pres., Gulf Bldg., let contract to H. H. Hines for \$15,000, 1-story, 60x70 ft., brick store, N. Main St. and Vincent St.; The Great Atlantic and Pacific Tea Co., 1513 Chapman St., Lessee.

Theatres

Tex., Lufkin—W. A. Foster has contract to erect \$15,000 theatre on Dozier Ave. for

owners of Texas Theatres, operated in this city by Lee Threat.

Warehouses

D. C., Washington—The Carpel Co., Inc., 2165 Queens Chapel Road, N. E., erect 1-story, 50x140 ft., brick and rein. conc. addition to warehouse; Chas. H. Tompkins, Contr., 1008 K St., N. W.

Ga., Valdosta—Savannah Avenue Tobacco Warehouse Co. erect \$25,000, 1-story, 206x240 ft., brick, hollow tile and frame warehouse; built-up roof, wood floors; Lloyd Greer, Archt.; owner builds. 5-8

Ky., Lexington—Central District Warehousing Corp., O. O. Carpenter, Gen. Mgr., 620 S. Broadway, erect 333x300 ft. tobacco warehouse; 100,000 sq. ft. floor space, brick and steel; plans addition to Maxwell Street warehouse capable of handling 1000 baskets.

Md., Baltimore—Jacobs Transfer Co., Inc., L. W. Mason, Sec.-Treas., 113 Florida Ave., N. E., Washington, D. C., erect \$16,000, 2-story, 52x89-ft. warehouse and garage, 19-25 E. Lee St.; Warren Spencer, Archt., 1350 Jonquil St., N. W., Washington, D. C. 4-3

Va., Richmond—E. L. Bass & Bros., 706 Bainbridge St., have contract for Kidd Warehouse, Scotts Addition.

WANT SECTION

THE CLASSIFICATIONS IN THIS SECTION ARE:

Machinery and Supplies

Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.

Building Materials and Equipment

This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.

Bids Asked

Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.

Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.

Machinery and Supplies

Concrete Block Machinery.—Elliott E. Brooks, Law Bldg., Fredericksburg, Va.—Wants prices and data on concrete machinery, especially concrete block machinery.

Conveyor (Unloading).—McGehee Realty & Lumber Co., Fourth and Mulberry St., Pine Bluff, Ark.—Wants prices and data on unloading conveyor.

Derrick.—Conner-Craven Equipment Co., 612 Chestnut St., Chattanooga, Tenn.—Wants prices and data on 50-ton steel guy derrick, 115-ft. mast, 100-ft. boom, with 2 drum steam hoist and boom swinger.

Engine (Steam), and Boiler.—G. W. Simmons, 1119 Vance Ave., Memphis, Tenn.—Wants prices and data on twin plain slide valve steam engine, 10x12 in. or slightly larger cylinders; also portable steam boiler, either Scotch marine or firebox about 150 h. p.

Motor (Electric).—Clermont Mineola Country Club, Inc., Clermont, Fla.—Wants electric motor for pumping system on 9 hole golf course.

Planer and Matcher.—Sauls Lumber Co., Wakulla, Fla.—Wants prices and data on 6x15 combination planer and matcher with top and bottom profile and all necessary shafting, pulleys, fan and blow pipe complete; itemized list may be had by addressing E. B. Sauls, Tybertown, Miss., or Sauls Lumber Co., Wakulla, Fla.

Power Mower.—Clermont Mineola Country Club, Inc., Clermont, Fla.—Wants mower for short and long grass for golf course.

Retorts.—Zeno Le Tellier, Engr., 747 52nd St., Milwaukee, Wis.—Wants prices and data on two copper lined retorts to be erected at Savannah, Ga.

Road Roller (Gasoline).—Ed. P. Phillips Machinery Co. (Mchy. Dealer), Ninth and Cary St., Richmond, Va.—Wants prices and data on used 10-ton, 3-wheel, gasoline road roller.

Roller Chains (High Speed).—Dorsey Brothers, Elba, Ala.—Wants prices and data from manufacturers of high speed roller chains.

Steam Engine (Corliss).—R. P. Johnson (Mchy. Dealer), Wytheville, Va.—Wants prices and data on first class used 20 h. p. girder frame Corliss steam engine, complete.

Track Scale.—Johnson & Hoehler, Inc. (Mchy. Dealer), Fernwood, Pa.—Wants prices and data on track scale, 100 ton, 50 ft., with dead rail, etc.

Trailer.—C. L. Hills, (Mchy. Dealer), 356 Central Ave., St. Petersburg, Fla.—Wants prices and data on 15 to 18-ton trailer, low platform, with 4 rear wheels with swiveling axles to conform to crown of road.

Water Motors and Water Wheels.—S. S. Wall, Swannanoa, N. C.—Wants prices and data from manufacturers of water motors and small water wheels for use in developing water power on small scale.

Davis L. Batson, P. O. Box 772, Greenville, S. C.—Wants prices and data from manufacturers of following:

- (1) **Mixing Machinery**—small, for mixing dry chemicals, liquids and greases
- (2) **Packing Equipment**—for packing above mentioned chemicals.

Del Monte Development Co., Inc., 808 Maverick Bldg., San Antonio, Tex., developing 648 subdivision and wants:

- (1) **Drilling Outfits**—2 rotary for gas and oil
- (2) **Pumps (Electrical)**—4 for water wells.

Miscellaneous

Automobile Top Materials.—W. O. Sisaco Tire Co., Jefferson & W. Holmes St., Huntsville, Ala.—Wants prices and data from manufacturers of auto top materials.

Cans, Drums, and Containers (Cardboard).—Davis L. Batson, P. O. Box 772, Greenville, S. C.—Wants prices and data from manufacturers of cans, drums and cardboard containers.

Dyes (Leather Goods).—W. B. Wolfe, 1338 Southwest Seventh St., Miami, Fla.—Wants prices and data from manufacturers of dyes for leather goods of all kinds.

Envelopes.—J. S. Goeppinger, 126 W. First St., Tulsa, Okla.—Wants prices and data from manufacturers of plain envelopes.

Furniture.—Jonesboro Supply House, Lock Drawer C, Jonesboro, Tenn.—Wants prices and data on furniture for Andrew Jackson Tavern now being completed; 30 rooms.

Greenhouse Equipment and Accessories.—Seabreeze Golf Course, E. L. King, 1235 S. Atlantic Ave., Daytona Beach, Fla., care J. R. Watkins Co., Winona, Minn.—Wants prices and data on greenhouse equipment and accessories.

Rail (Relaying).—R. P. Johnson (Mchy. Dealer), Wytheville, Va.—Wants prices and data on 2½ mi. of 16-lb. relaying rail, or will lease for about 2 years.

M. H. Connell, Consit. Engr., 3675 S. W. 25th Terrace, Miami, Fla.—Wants to contract with firm to manufacture metal parts for air-conditioning unit for treating hay-fever, asthma, etc.; unit consists of metal box with loose perforated front and cover; interior consists of blower fan and revolving disk, which throws wet solution to filter cloth which conditions air blown by fan; under disk is placed metal tank; also certain metal housings around fan and disk.

Building Material and Equipment

Brown & Myers, Struct. Engrs., 1721 Petroleum Bldg., Oklahoma City, Okla., want prices on following for auditorium, Granite, Okla.:

Plaster Board
Roofing—built-up
Tile—hollow.

Byrne & Luther, Inc., 5444 Byers Ave., Fort Ave., Fort Worth, Tex., wants prices on following for dwelling:

Electric Refrigerators
Flooring—hardwood, tile
Incinerator
Roofing (hip)—tile.
Estes W. Mann, Archt., Cotton Exch. Bldg.,

Chas. G. Andrews, Sec., School Bd., No. 100, Cecil, Ark., wants prices on following for \$13,000, 6-room school:

Roofing (hip)—asbestos shingle
Steel Sash and Trim
School Furniture—desks, seats; book cases for library.

Del Monte Development Co., Inc., 808 Maverick Bldg., San Antonio, Tex., wants prices on following for 648-acre subdivision work:

Brick
Cement
Lime
Lumber
Paint.

Harrisonburg Building & Supply Co., Inc., Contr., Harrisonburg, Va., wants prices on following for workshop for Virginia Association of Workers for the Blind, Charlottesville, Va.:

Cast Stone
Flooring—lineloom
Metal Doors
Rolling Doors
Roofing—built-up
Steel Sash and Trim
Tile—hollow.

Hugh McCaslin, Mayor, Snyder, Okla., wants prices on following for \$10,000 town hall:

Flooring
Metal Ceilings
Metal Doors
Roofing (flat)
Vaults
Vault Lights

J. S. Storm, 518 Fourteenth St., N. W., Atlanta, Ga., wants prices on following for \$10,000 residence:

Electric Refrigerators
Flooring—hardwood, tile
Plaster Board
Roofing—asbestos shingle, asphalt shingle, tile
Tile—interior
Ventilators (kitchen).

J. S. Downing, Bldr., 2600 Greenmount Ave., Baltimore, Md., wants prices on following for 250 houses (small masonry):

Cement, Lime, Plaster, Stone, etc.
Hardware
Heaters—electric, bathroom
Kitchen Equipment, Dressers, etc.
Lime
Lumber—in car lots
Millwork
Radiators—concealed
Tile
Ventilators—electric
Wallpaper.

J. W. Dehnert, Archt., 624 Esperson Bldg., Houston, Tex., wants prices on following for \$15,000 hospital ward:

Electric Refrigerators
Flooring—hardwood, tile
Roofing, tile
Steel Sash and Trim
Tile—hollow.

Lamar Q. Cata, Archt., Bankers Mtg. Bldg., Houston, Tex., wants prices on following for \$110,000 temple:

Flooring—hardwood, tile
Limestone
Marble
Roofing (flat)
Tile—hollow.

McDonald & Co., Archts.-Engrs., South-eastern Trust Bldg., Atlanta, Ga., want prices on following for \$260,000 theatre, Va.-Tenn., Bristol for Bristol Theatre Corp.:

Electric Refrigerators
Flooring—linoleum, terrazzo, tile, composition
Marble
Metal Doors
Roofing—built-up, tile
Tile—hollow, interior
Terra Cotta
Ventilators
Wire Glass
Brass and Bronze Work.

McGehee Realty & Lumber Co., Fourth and Mulberry St., Pine Bluff, Ark., wants prices on following for lumber sheds:

Roofing, etc.

Estes W. Mann, Archt., Cotton Exch. Bldg., Memphis, Tenn., wants prices on following for \$76,000 hospital, Brownsville, Tenn.:

Electric Refrigerators
Elevators
Flooring—terrazzo, tile
Limestone
Marble
Metal Doors
Roofing (flat)—built-up
Steel Sash and Trim
Tile—gypsum, hollow
Ventilators
Wire Glass
Brass and Bronze Work.

Sidney McCall, Contr., 3404 Marmon Ave., Baltimore, Md., wants prices on following for \$40,000 church:

Metal Ceilings
Rolling Partitions
Steel Sash and Trim.

Wm. D. Van Sicken, Archt., State Natl. Bank Bldg., Brownsville, Tex., wants prices on following for 2-story, 8-apartment:

Electric Refrigerators
Flooring—hardwood, linoleum
Incinerator
Plaster Board
Roofing—built-up, tile
Tile—hollow.

W. R. Griffin, Archt., Levy Bldg., Sweetwater, Tex., wants prices on following for \$125,000 Jr. High School on Lamar St.:

Cast Stone
Electric Refrigerators
Flooring—hardwood, terrazzo
Marble
Metal Doors
Roofing—built-up
Steel Sash and Trim
Tile—hollow
Vaults
Brass and Bronze Work.

Will N. Noonan Co., Archt., Builders Exchange Bldg., San Antonio, Tex., wants prices on following for \$35,000 school, Gonzales, Tex.:

Cast Stone
Flooring—tile
Roofing—built-up.

Bids Asked

Beams (Steel).—Comms., Dist. of Columbia, Washington, D. C.—Bid June 2 for struc. steel beams.

Boat.—U. S. Engr. Office, Vicksburg, Miss. Bids June 6 for construction and delivering afloat at Vicksburg, Miss., 32-ft. steel-hull fire boat.

Boiler, etc.—Treasury Dept., Office of Supervising Archt., Washington, D. C.—Bids June 12 for new boiler, etc., in U. S. post-office, Aiken, S. C.; plans with Custodian, U. S. P. O., Aiken, and Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C.

Boiler Tubes.—U. S. Engr. Office, Huntington, W. Va.—Bids May 26 for boiler tubes, 4-in. diam., genuine iron, No. 10 gauge.

Bridges.—State of Missouri. Bids for 15 bridges. See Construction News—Roads, Streets, Paving.

Bridges.—State of Virginia. Bids for 2 bridges. See Construction News—Roads, Streets, Paving.

Bridge.—Norfolk, Va. See Construction News—Bridges, Culverts, Viaducts.

Bridges.—State of Florida. Bids for 12 bridges. See Construction News—Roads, Streets, Paving.

Bridge.—State of West Virginia. See Roads, Streets, Paving.

Cement (Portland).—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids June 2 for Portland cement, Sch. 2560.

Cable.—Office of Chief of Engrs., Washington, D. C.—Bids May 27 for 15,000 ft. 2-conductor cable and 8 cable reels, 2100 ft. controller cable and 1 reel, and 5000 ft. special reinforced cable and 2 reels.

Car (Railroad).—Office of Chief of Engrs., Munitions Bldg., Washington, D. C.—Bids May 28 for 40-passenger railroad car.

Coal Bunker and Stoker.—Construction Div., Veterans' Bureau, Washington, D. C.—Bids June 3 for constructing coal bunker and mechanical stoker, U. S. Veterans' hospital, Lexington, Ky.

Coal.—Quartermaster Supply Officer, Fort Sam Houston, San Antonio, Tex.—Bids June 2 for 195 tons smithing coal.

Drainage System.—U. S. Engr. Office, Memphis, Tenn.—Bids May 29 for pipe drainage system for town of Wyatt, Mo., and vicinity.

Dredging.—U. S. Engr. Office, First New Orleans Dist., Poland & Dauphine Sts., New Orleans, La.—Bids May 27 for dredging Louisiana and Texas Intracoastal Water Way, Atchafalaya-Vermilion section, Bayou Georgia to Vermilion River, comprising 8,819,000 cu. yd., place measurement.

Electrical Supplies.—Chemical Warfare Service, Edgewood Arsenal, Edgewood, Md.—Bids May 26 for couplings, conduit, lock-nuts, sockets, wire, ells, fuses, conduits, fuses, transformers, etc.

Garage Equipment.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids May 26 for electric lubricator and 2 grease guns, delivery Quantico, Va.

Gasoline.—Quartermaster Supply Officer, Washington, D. C.—Bids May 27 for 36,000 gal. gasoline.

Gasoline, etc.—Quartermaster Supply Officer, Washington, D. C.—Bids May 27 for gasoline, grease and oil as required during month of June.

Grease, Oil, etc.—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids May 29 for following, Sch. 2558:

Cup greases, lubricant (gear, chain and wire rope), car and locomotive engine oil, and cotton waste.

Gravel.—State of Louisiana. See Construction News—Roads, Streets, Paving.

Gravel.—Highway Comms. Attala County Separate Road Dist., W. C. Leonard, Chmn., Kosciusko, Miss. Bids May 29 for 90,000 tons washed gravel.

Gravel.—Louisiana Highway Comsn., H. B. Henderlite, State Highway Engr., Baton Rouge, La.—Bids May 27 for washed or screened gravel, 40% sand-clay gravel, reef shell, clam shell, crushed limestone, slag and sand for maintenance purposes during June 1930.

Highway Markers.—State Road Dept., Tallahassee, Fla.—Bids May 27 for approx. 2000 standard caution and warning signs and approx. 725 U. S. Florida Route signs, approx. 900 cast iron projects markers and 1200 cast iron arrows.

Laboratory Apparatus.—Comms., Dist. of Columbia, Washington, D. C.—Bid May 26 for laboratory apparatus, materials and charts.

Lighting System (Flying Field).—War Dept., Office of Constructing Quartermaster, Fort Bragg, N. C.—Bids June 12 for night flying lighting system, Pope Field, Fort Bragg.

Lumber.—U. S. Engr. Office, Memphis, Tenn.—Bids May 26 for approx. 21,000 ft. lumber.

Lumber.—Bd. of County Comms., of Duval County, Jacksonville, Fla.—Bids June 2 for 40,000 ft. long leaf, prime grade, fine grain yellow pine lumber, dressed on 4 sides.

Miscellaneous Machinery, Tools, etc.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids May 27 for universal and tool grinding machine and attachments; bids June 3 for motor driven engine lathes, carbon and high speed twist drills, rules and tapes; bids June 10 for sharpening stones, vises, electric and flat soldering irons, hammers, axes, hatchets, mallets, sledges, etc.

Miscellaneous Machinery, Tools, etc.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids June 3 for refrigerating equipment and spare parts, portable electric drills and grinders, motor driven drill grinding machine, oxy-acetylene cutting, and welding torches; bids June 10 for breast and hollow handle drills, ratchet braces and drills.

Miscellaneous Machinery.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids May 27 for furnishing tool-grinding machine, arc welding set, acetylene, oxygen and carbon dioxide gas services and material to repair boilers, to Naval Academy, Annapolis, Md., etc.

Miscellaneous.—Panama Canal, Office of Pur. Officer, Washington, D. C.—Bids June 9 for following, Sch. 2563:

Steel, coil chain, steel conduit pipe (galv. lead and block tin), copper bars, solder, monotype metal, bolts, nuts, rivets, screws, ogee washers, box strappings, etc.

Paving.—St. Louis, Mo. See Construction News—Roads, Streets, Paving.

Pipe.—State Road Dept., Robert W. Bentley, Chmn., Tallahassee, Fla. Bids May 27 for 700 lin. ft. 24-in. and 800 lin. ft. 18-in. corrugated iron, vitrified clay or rein. conc. pipe, for road work in Escambia and Levy Counties; f. o. b. cars Gulf Point, and Morriston; B. M. Runcan, State Highway Engr.

Pipe (Reinforced Concrete).—See Sewer Construction.

Pipe (Vitrified).—See Sewer Construction.

Pipe, etc.—Treasury Dept., Office of Supervising Archt., Washington, D. C.—Bids June 10 for installing brass water pipe and miscellaneous repairs to plumbing and heating systems in U. S. post-office, Dyersburg, Tenn.

Plumbing Supplies.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids May 27 for plumbing supplies, delivery Quantico, Va.

Pumping Unit.—U. S. Property and Disbursing Officer for Texas, Camp Mabry, Austin, Tex.—Bids June 10 for auxiliary pumping unit at National Guard Camp, Palacios; information on application.

Propeller.—U. S. Engr. Office, 4400 Dauphine St., New Orleans, La.—Bids May 26 for cast-steel propeller.

Pump (Dredging).—U. S. Engr. Office, Savannah, Ga.—Bids May 27 for dredging pump.

Pump and Receiver.—U. S. Engr. Office, Memphis, Tenn.—Bids May 26 for pump and receiver.

Reservoir.—Town of Wilson, N. C., Charles B. McClean, Mayor, Wm. C. Olsen, Inc., Const. Engrs., Raleigh—Bids June 5 for furnishing labor, material and constructing rein. conc. filtered water reservoir.

Roads.—State of Maryland. Bids for 6 roads. See Construction News—Roads, Streets, Paving.

Roads.—Dallas, Tex. Bids for 2 roads. See Construction News—Roads, Streets, Paving.

Road.—State of Louisiana. See Construction News—Roads, Streets, Paving.

Road.—Fort Worth, Tex. See Construction News—Roads, Streets, Paving.

Roads.—Huntington, W. Va. Bids for 9 roads. See Construction News — Roads, Streets, Paving.

Roads.—State of Virginia. Bids for 6 roads. See Construction News—Roads, Streets, Paving.

Roads.—State of Missouri. Bids for 45 roads. See Construction News — Roads, Streets, Paving.

Roads.—State of Florida. Bids for 4 roads. See Construction News — Roads, Streets, Paving.

Roads.—State of West Virginia. Bids for 8 roads. See Construction News — Roads, Streets, Paving.

Roads.—Miami Beach, Fla. Bids for 2 roads. See Construction News — Roads, Streets, Paving.

Sewer Treatment Plant.—City of Houston, Tex.—Bids May 28 for 2400 ft. of continuous vacuum filter area and accessories at North Side sewage treatment plant; plans, etc. at office of G. L. Fugate, Acting City Engr.

Sewer Construction.—City of Port Arthur, Tex., J. W. O'Neal, Mayor, W. O. Bower, City Engr.—Bids June 10 for materials, equipment and labor necessary to construct Thomas Boulevard storm sewer; work includes 2902 ft. 72-in., 314 ft. of 36-in., 414 ft. of 30-in., 3484 ft. of 24-in., rein. conc. pipe; 6725 ft. of rein. conc. culverts, sizes 6 ft. x 7 ft. to 9 ft. x 12 ft.; 16,478 cu. yds. excavation; 13,676 cu. yds. of backfill.

Sewer Construction.—Bd. of Awards, Baltimore, Md.—Bids May 28 for building sanitary sewers and storm drains, Storm Water Contr. No. 58; work includes 23,600 cu. yds. excavation; 476 ft. of 24, 27 and 30-in. rein. conc. pipe drain; 778 ft. of 27-in., 2600 ft. of 24-in., 940 ft. of 18-in., 1000 ft. of 21-in., 540 ft. of 15-in. vit. pipe sewer and drain;

920 ft. of 6, 8, 10 and 12-in. vit. pipe sewer; 5700 ft. of 6, 8 and 10-in. underdrain, 575 rt. Standard manholes; 4200 cu. yds. conc. masonry; plans, etc., at office of Milton J. Ruark, Sewerage Engr.

Shade Cloth.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids May 27 for 1500 yd. shade cloth, delivery Quantico, Va.

Sheet Steel, etc.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids May 28 for sheet steel, etc., delivery Quantico, Va.

Stationery.—Secy., U. S. Senate, Washington, D. C.—Bids June 4 for furnishing stationery for use of U. S. Senate for fiscal year 1931.

Street.—Marshall, Tex. See Construction News—Roads, Streets, Paving.

Truck.—U. S. Coast Guard Headquarters, Washington, D. C.—Bids May 27 for telephone line construction truck.

Upholstering Supplies.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids May 28 for furnishing upholstering supplies, delivery Quantico, Va.

Upholstery Supplies.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids May 26 for furnishing upholstery supplies, delivery Quantico, Va.

Waterfront Improvements.—Office of City Engr., Miami Beach, Fla.—Bids June 4 for creosoted timber piles, untreated timber piles, steel sheet piling in bulkhead, steel piling in groynes, channel wale, creosoted timber struts, creosoted timber wales, untreated bearing timber, earth fill, connection with existing seawall and trestle work for 2 groyne extensions. See Construction News Columns—Miscellaneous Construction.

Water Works.—Bd. of Awards, Baltimore, Md.—Bids June 4 for constructing Vernon Pumping Station; plans, etc. at office of E. G. Rost, Water Engr.

Buils Two Plants in Fast Time.

The Gulf Refining Co., Pittsburgh, Pa., recently completed a new storage plant on Staten Island and a large new power plant at its oil refinery at Port Arthur, Tex., both plants being erected in fast time. The Staten Island plant has a storage capacity of 1,920,000 barrels, including twenty-four 80,000-barrel oil tanks. It occupies an area of 40 acres. The power plant at Port Arthur will use refinery waste products—sludge oil and pulverized paraffin petroleum coke. It contains 3 boilers of 15,400 square feet each and a turbine of 10,000 kw. capacity. The United Engineers & Constructors, Philadelphia, Pa., designed and built both plants.

Bristol Steel and Iron Works, Inc.

The Virginia State Corporation Commission recently approved an amendment to the charter of the Twin City Boiler Works, Bristol, Va.-Tenn., authorizing the company to change its name to the Bristol Steel & Iron Works, Inc., and increasing its capital stock from \$15,000 to \$200,000. No change has been made in management of the company, whose officers include J. G. Tilley, president and general manager; W. L. Griffin, vice-president and superintendent; W. J. Tilley, secretary and treasurer, and G. M. Stone, engineer. The company produces structural steel for buildings, bridges, transmission towers and other construction, with steel plate and miscellaneous iron work.

Yellow Strand Rope in Bridge Work.

The use of Yellow Strand wire rope, manufactured by the Broderick & Bascom Rope Company, St. Louis, Mo., played an important part in construction of the new \$1,250,000 memorial bridge across the Mississippi River at Quincy, Ill. The bridge, which is soon to be dedicated, is over 3700 feet long and was designed by the Strauss Engineering Corp., Chicago. General contract was awarded to the Kelly-Atkinson Construction Company, Chicago, which sub-let the river portion of substructure work to the Foundation Company, New York. Superstructure was built by the Kelly-Atkinson company, using Yellow Strand wire rope on all material-handling equipment. About 3200 tons of steel fabricated at Gary, Ind., by the American Bridge Company, was unloaded on the Quincy side with a locomotive crane, hoisted to the superstructure by a yard derrick and hauled to a 52-ton erection traveler by a 5-ton Plymouth gas locomotive. Maximum lift for the successive machines and their wire rope equipment was 35 tons. On none of the machines was the rope more than $\frac{3}{4}$ -inch, much of it being $\frac{5}{8}$ -inch, and it had been used on a previous contract.

\$12,000,000 Iron Mill to Open.

A new \$12,000,000 mill for making wrought iron automatically, using a method developed by Dr. James Aston, director of the department of mining and metallurgy of the Carnegie Institute of Technology, will soon be opened, it is announced. The mill was built by the A. M. Byers Company, Pittsburgh, Pa.

Southern Goodyear Plant Sets Record.

Officials of the Dixie plant at Gadsden, Ala., of the Goodyear Tire & Rubber Company recently celebrated the building of tire No. 1,000,001, with Mayor W. E. Weir and other prominent citizens present. The production of 1,000,000 tires in less than a year is the best record of any Goodyear plant.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers, whether they are advertisers, or subscribers, or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Becomes Part of American Manganese.

The Southern Manganese Steel Company, St. Louis, Mo., until recently operated as a subsidiary of the American Manganese Steel Company, Chicago Heights, Ill., has now become a part of that company and will be operated as its Southern Manganese Steel Division. The Southern Manganese Steel Company has been active in development of Fahr alloy, trade name for a heat and corrosion-resisting alloy steel. The American Manganese Steel Company has opened an office in the Law and Finance Building, Pittsburgh, in charge of W. G. Hoffman, who will handle the sale of Amco manganese steel castings and Fahr alloy castings.

Progress and Development of Roanoke.

A photogravure section recently issued by the Roanoke Times and the Roanoke World-News graphically portrays by illustration and text the remarkable progress and development of the Roanoke area. An article on the Industrial and Commercial Growth of Roanoke briefly presents the history of Roanoke's progress along these lines, while the diversity of the city's industries is emphasized by pictures of various industrial activities. The publication also devotes space to a review of the city's activities along cultural and religious lines and to its importance as a musical center, carrying in short a "message of Roanoke's well rounded growth," according to H. E. McCreedy, manager of the Industrial Department of the Roanoke Chamber of Commerce, and outlining its "suitability for industrial and commercial enterprises and its facilities for happiness and comfort for people in all walks of life."

New Treadwell District Manager.

The Hahn Division of the Treadwell Engineering Company, Easton, Pa., announces appointment of J. J. Conway, with offices at 90 West street, New York, as district manager of the New York territory. The Philadelphia office has been moved to the Stock Exchange Building. G. E. Kille is district manager.

Takes Over Graver Corporation.

The Phoenix Manufacturing Company, operating plants at Catasauqua, Pa., Joliet, Ill., and Montreal, Canada, with an annual production capacity of more than 40,000 tons of iron and steel products, has taken over from the Graver Corporation its steel tank, water treating and steel plate construction business, including its plant at East Chicago, Ind., which it will operate as a subsidiary under the name of the Graver Tank & Manufacturing Corp. The new company will maintain branch sales offices in Chicago, New York, Dallas, St. Louis and other centers. General offices will be maintained at East Chicago. Officers include: Edward N. Gosselin, president; F. C. Everitt, vice-president and general manager; R. E. Meyer, secretary and treasurer; P. S. Graver, vice-president in charge of sales; W. F. Graver and H. S. Graver, vice-presidents.

7-Bladed Road Planer.

The Caterpillar Tractor Co., San Leandro, Cal., announces a one-man, 7-bladed planer, making an 11-foot cut and built to team with the Caterpillar 20 tractor in road construction and other work. The planer is mounted on four wheels to eliminate heavy draft and its multiple blades fill in depressions and quickly spread materials.

W. K. M. Dragline Excavator.

A new unit consisting of a W. K. M. boom and Williams double arch dragline bucket, recently put in production by the W-K-M Company, Inc., Houston, Tex., for use with the model 30 Caterpillar tractor, is designed for digging shallow trenches for pipe line work, sewer work, irrigation canals, drainage ditches, building rows for sugar cane and other work which would not warrant heavier equipment. The bucket is the 1/4-yard size with digging teeth and works as a dragline job with the boom at an angle of 45 degrees. A feature of this outfit is that the user may have his tractor available for all drawbar jobs.

Fairless Heads Union Drawn Steel.

B. F. Fairless, first vice-president of the Republic Steel Corporation, Youngstown, Ohio, has been elected president of the Union Drawn Steel Company, Beaver Falls, Pa., a Republic subsidiary, to succeed E. S. Hopps, resigned. Other officers include: H. T. Gilbert, vice-president; E. C. Rebeske, secretary and treasurer; J. Paul Mosley, assistant secretary and treasurer; George B. Mitchell, vice-president in charge of sales, and L. E. Creighton, vice-president in charge of operations. The sales offices will be moved to Youngstown, the better to co-ordinate sales efforts.

Allis-Chalmers Group Insurance.

Through its president, Otto H. Falk, the Allis-Chalmers Manufacturing Co., Milwaukee, Wis., has announced a group insurance plan for about 10,000 employees of the company. The contract will involve approximately \$20,000,000 and was underwritten by the Metropolitan Life Insurance Company, New York.

New Baltimore Engineering Firm.

Charles L. Reeder, prominent consulting engineer of Baltimore, announces the formation of a partnership to be known as Reeder, Elser & Akers, consulting engineers, with offices at 916 North Charles street, Baltimore. In addition to Mr. Reeder, the other members of the firm include John L. Elser and H. Albert Akers.

Gregg on Board of Steel Institute.

Robert Gregg, president of the Atlantic Steel Company, Atlanta, Ga., has been elected a director of the American Iron and Steel Institute, New York. Mr. Gregg has been connected with the Atlantic Steel Company since 1906 and president since 1922.

Trade Literature

Aerial Forest Surveys.—James D. Lacey & Co., timberland factors, and Fairchild Aerial Surveys, Inc., general aerial operations, both of New York City, have combined their facilities for air and ground service in forest engineering and related lines. The Lacey company has one of the largest staffs of trained forest engineers in North America, while the Fairchild company not only makes its own planes and aerial cameras but operates fully equipped laboratories. Southern Lacey offices are maintained at New Orleans, Jacksonville, Memphis, Charleston and Asheville, while the Fairchild company maintains a Southern office in Dallas. A folder issued by the companies describes their services.

Steel Bridges.—The American Institute of Steel Construction, New York, in order to encourage the building of steel bridges of greater architectural merit, announces a second annual competition for the "most aesthetic solutions of steel bridge construction in the United States and Canada." The awards will be made to structures completed and opened in 1929, based on decision by a jury. Selection will be made by photographs, and entries are requested from engineers, architects, fabricators, builders, owners, chambers of commerce, leagues and public officials. The contest will close June 1, 1930.

Weigh Batcher.—The Johnson Bantam weigh batcher for wheelbarrow batching of aggregates is described and illustrated in a folder being distributed by the C. S. Johnson Company, Champaign, Ill. The batcher weighs 280 pounds and is designed for work on buildings, culverts, small bridges, curbs and gutters. It is separate from the mixer and is not affected by mixer vibration.

Couch to Head Utility Association

Hot Springs, Ark.—The nominating committee of the Southwestern Division of the National Electric Light Association, New York, has nominated Harvey C. Couch, Pine Bluff, president of the Arkansas Power & Light Company, for president. R. W. Curran, general manager of the Little Rock Gas and Fuel Company, was elected president of the Arkansas Utilities Association, and W. E. Gosdin, Little Rock, division manager of the Southwestern Bell Telephone Co., was named first vice-president. A. G. Whidden, publicity director of the Arkansas Power and Light Co., was named second vice-president, and Rex I. Brown, Little Rock, was re-elected secretary and treasurer.

Paper Plant Needed to Utilize Rice Straw

Efforts of the Chamber of Commerce of Stuttgart, Ark., are being concentrated on locating a paper plant in that city of 6000 population. Rice is the principal crop of the territory surrounding the city and the paper mill is needed to utilize the rice straw. Five large rice mills are now operating in the community.

Acquires Dallas Utilities

Dallas, Tex.—The Southern Ice and Utilities Company of this city, serving important communities in Texas, Oklahoma, Arkansas and Louisiana, has been acquired by the Associated Gas and Electric System, New York. H. D. Fitch becomes president of the local company and G. C. Hyde, vice-president and gen-

Asphalt Emulsions.—Pamphlets describing Flintkote asphalt emulsions and illustrating some applications are being distributed by the Industrial Emulsion Department of the Flintkote Company in New York. One pamphlet is devoted to the product as used for repairing and coating wood, metal and composition roofing, while another deals with its uses for waterproofing and dampproofing and still another for floors. The company maintains its principal office at Boston, with branches at Chicago, Cincinnati, New Orleans and New York.

Arc Welding.—Bulletins Nos. 12 and 13, part of a series of similar publications published by Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa., are devoted to late developments in arc welding.

Industrial Safety.—Methods of stimulating employee interest in safety by developing the spirit of friendly competition are presented in a report published in pamphlet form by the Policyholders Service Bureau of the Metropolitan Life Insurance Company, New York.

eral manager. Its ice properties have a daily capacity of 2770 tons and storage for 75,000 tons. The company operates about 1,700,000 cubic feet of refrigerated warehouse space, and in Dallas it owns a storage plant directly over the Santa Fe railroad terminal. It also owns 15 ice cream plants with a daily capacity of 6750 gallons, while its creameries produce 10,000 pounds of butter daily.

Virginia Forges Ahead in Paper Production

University, Va.—Based on a detailed study of the paper industry in Virginia, Professor Lauren B. Hitchcock, associate professor of the school of chemical engineering of the University of Virginia, declares the state's position of leadership in the industry will be pushed further ahead to contribute perhaps 40 per cent of the value of Southern paper in 1930. Virginia has produced in recent years about 31 per cent of the entire Southern output and is manufacturing at present 420 tons daily of a series of kraft products, according to Professor Hitchcock, which are used in making automobile panels, wrapping paper and artificial willow furniture. Three new plants having a total capacity in excess of 225 tons daily contribute to the recent expansion of the industry in Virginia, and include a \$2,000,000 liner-board mill at Lynchburg operated by the John H. Heald Company and the Mead Paperboard Corporation of Dayton, Ohio; 100-ton paper and liner plant at West Point of the Albemarle-Chesapeake Company, and a new plant at Fredericksburg operated by the Sylvania Industrial Corporation for the production of transparent paper from wood cellulose.

\$42,750,000 STOCKHOLDERS' RIGHTS

Cities Service Company Plans \$155,000,000 Expenditures

According to an announcement by Henry L. Doherty & Co., New York, the Cities Service Company of that city has offered rights to holders of common stock of record May 29, valued at \$42,750,000, to permit the purchase of \$120,000,000 of 5 per cent convertible debentures due 1950. Holders will receive the right to purchase \$4 principal amount of the debenture for each share of stock held, or \$100 principal amount for each 25 shares owned, the rights to be exercised and debentures paid for on or before June 16. The debentures will be in denominations of \$100, \$500 and \$1000, the issue having been underwritten by Harris, Forbes & Co., New York; Halsey, Stuart & Co. and the Harris Trust and Savings Bank, Chicago. Proceeds of the issue, with surplus earnings, will provide for a 1930 expansion program to cost \$155,000,000. The major construction item involved calls for a \$100,000,000 natural gas pipe line system from the Amarillo field in Texas to Chicago and Eastern points, an enterprise in which the Cities Service Company and Insull interests of Chicago will participate. Construction of the line will be handled by the Continental Construction Company, it is said, organized by these interests for that purpose. It will occupy offices in the Professional Building, Eleventh street and Grand avenue, Kansas City, Mo. The National Tube Company, Pittsburgh, Pa., will furnish pipe, it is understood.

Chesapeake and Ohio Changes

Richmond, Va.—As a result of the acquisition of the Hocking Valley Railway, the Chesapeake and Ohio Railway Company announces a number of important appointments and changes in jurisdiction. The Hocking Valley properties will be operated as the Hocking division of the Western General division of the Chesapeake and Ohio, and the engineering, construction and operating departments, all heretofore under the supervision of R. N. Beglen, vice-president, will be divided. Mr. Beglen will continue in active supervision of the engineering and construction departments, while George D. Brooke, general manager of the Chesapeake and Ohio, will become vice-president and general manager in charge of operations. M. S. Connors, general manager of the Hocking Valley, becomes assistant to Vice-President Brooke and H. Q. Wasson, former general freight agent of the Hocking Valley, becomes assistant gen-

eral freight and passenger agent, both with headquarters at Columbus, Ohio. Captain W. H. Fisher, for many years general passenger agent of the Hocking Valley, retires from active service and the jurisdiction of T. H. Gurney, passenger traffic manager of the Chesapeake and Ohio, is extended to include the Hocking. F. D. Hodgson, comptroller of the Hocking Valley, becomes assistant to the comptroller, with an office at Richmond, and William Michel, chief engineer of the Hocking, becomes chief engineer, advisory committee, ways and structures, with an office at Cleveland, Ohio.

Pittsburgh Interests Purchase South Carolina Wood Preserving Plant

Charleston, S. C.—The Carolina Wood Preserving Co., a new South Carolina corporation representing the interests of Grant B. Shipley, Pittsburgh, Pa., and J. F. Prettyman & Sons of this city, has purchased the J. F. Prettyman & Sons' wood preserving plant here, according to Thomas J. Thorne, vice-president and general manager of the new company and former manager of the Prettyman wood preserving operations. In addition to Mr. Thorne, other officers of the new company include Mr. Shipley, president; E. S. Park, vice-president; H. W. Wehe, secretary and treasurer. These officers with Cannon F. Prettyman, formerly vice-president and general manager of J. F. Prettyman & Sons, compose the board of directors. Mr. Shipley is president of the Century Wood Preserving Company, Pittsburgh, a holding company in which the Carolina Wood Preserving Company will be a unit. Other companies in the group include: The New England Wood Preserving Company, Nashua, N. H.; Delaware Wood Preserving Company, Newport, Del.; Maryland Wood Preserving Company, Hagerstown, Md.; Ohio Wood Preserving Company, Orville, Ohio; Pittsburgh Wood Preserving Co., Pittsburgh, and the Michigan Wood Preserving Co., Reed City, Mich.

San Antonio Votes \$4,975,000 Bonds

San Antonio, Tex.—A bond issue of \$4,975,000 has been voted by the city for the following purposes: Storm and sanitary sewers, \$600,000; street widening and extensions, \$750,000; river, San Pedro and Alazan Creek work, \$1,000,000; street paving, \$1,000,000; bridges, \$175,000; police and fire departments, \$600,000; parks and Winburn Field, \$700,000, and hospital annex, \$150,000.

West Texas Chamber of Commerce to Meet at Abilene

Abilene, Texas.—When the 12th annual convention of the West Texas Chamber of Commerce opens here, May 29, for three days, a plan new to meetings of the regional organization will be in effect. This plan provides that every member of the organization is to be given an opportunity to participate in the business of the body. Heretofore matters of importance to the convention have been argued out and decided by various appointed committees and conference groups.

W. B. Hamilton, president of the West Texas Chamber of Commerce, will place a constructive program before the organization as a whole and is aiming at definite results.

One of the highlights of regional chamber conventions of the past few years—the "My Town" Contest—should bring together community boosters and speakers from a large number of West Texas towns. In addition to cups and other prizes, scholarships are being offered to the winners of eight West Texas colleges.

D. A. Bandeen, general manager of the West Texas Chamber, with the executive board has formulated a work program for the organization which deserves the united support of every progressive West Texas citizen.

Domestic Graphite Sold in 1929

Total quantity of graphite sold by graphite miners in the United States in 1929 and its value were considerably larger than the corresponding figures for 1928, according to the United States Bureau of Mines. Sales of natural graphite by producers in 1929 were 6458 tons, valued at \$310,891, an increase of 847 tons or 15 per cent in quantity, and \$13,798 or 5 per cent in value. The total sales include 3555 tons of amorphous, a gain of 561 tons, and 2903 tons of crystalline graphite, 286 tons more than in 1928. Quantity and value of crystalline graphite sold in 1929 was the largest since 1920. Statistics of sales of graphite were collected in cooperation with the geological surveys of Alabama, Michigan, and Texas.

States reporting the sale or use of graphite by the miner in 1929 were Alabama, Michigan, Nevada, Rhode Island, and Texas. Texas was the leading state in the sales of crystalline graphite in 1929.

Imports of graphite in 1929 amounted to 24,072 short tons, valued at \$1,066,834, compared with 17,569 short tons, valued at \$801,559, in 1928, an increase of 37 per cent in quantity and 33 per cent in value.

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TULSA
WACO
WASHINGTON
WHEELING
WILMINGTON, DEL.
WINSTON-SALEM
YOUNGSTOWN

FINANCIAL NEWS

Bond Issues Proposed

Ala., Birmingham—City Comsn. plans selling, June 13, \$1,477,000, 5% bonds: \$1,000,000, grade separation; \$147,000, sewer; \$330,000 public improvement; A. J. Hawkins, City Engr.

Arkansas—Highway—State of Arkansas, Ralph Koonce, State Treas., Little Rock, receives bids June 18 for \$18,000,000, 4½% to 5% bonds.

Fla., Cross City—State Road Dept., Robert W. Bentley, Chmn., Tallahassee, receives bids June 9 for \$75,000, 6% Dixie County coupon time warrants.

Fla., Milton—Road, Bridge—Santa Rosa County Comms., T. W. James, Clk., plans selling, soon, \$100,000 bonds, recently voted.

Fla., St. Petersburg—City, H. T. Davis, Dir. of Finance, received no bids for \$1,350,000, 5½% and 6% bonds; \$1,000,000, improvement; \$350,000, refunding. 5-1

Ga., Dalton—School—City defeated \$95,000 bonds. 5-8

La., Bastrop—Road, Bridge—Morehouse Parish Police Jury may receive bids in June for \$165,000 bonds recently voted.

La., Forest—Forest School Dist. No. 3, West Carroll Parish, voted \$38,000 bonds.

La., Hahnville—St. Charles Parish Police Jury called election for July 22 on \$100,000 jail bonds.

La., Rayville—Richland Parish voted \$225,000 School Dist. No. 18 bonds; J. A. Ball, Pres. of School Board. 4-24

Md., Baltimore—Road, Bridge—City, Wm. F. Broening, Mayor, considering voting in fall on \$2,000,000 loan.

Miss., Carthage—Courthouse—Leake County Bd. of Suprs. plans issuing \$90,000 bonds.

Miss., Hazlehurst—City plans selling, in few weeks, \$50,000 bonds for street paving.

Miss., Gulfport—Harrison County voted \$28,000 Woolmarket Consolidated School Dist. bonds. 5-1

Miss., Horn Lake—Horn Lake School Dist. voted \$40,000 bonds.

Miss., Houston—Paving—Town, R. F. Brand, Clk., receives bids May 23 for \$127,000 bonds.

Miss., Jackson—State of Mississippi, reported, receives bids May 30 for \$5,000,000, 5½% certificates of indebtedness.

Miss., Jackson—Hinds County votes May 30 on \$100,000 bonds.

Miss., Lexington—Hospital—Holmes County Election Comsn. called election for May 30 on \$50,000 bonds.

Miss., Liberty—Amite County School Bd. receives bids May 21 for \$9,000 East Fork Consolidated School Dist. bonds; subject to election May 17. 4-24

Mo., Benton—Jail—Scott County considering \$45,000 bond election.

Mo., Stark City—Stark City Consolidated School Dist. No. 9 voted \$27,000 bonds; Floyd Fritts, Pres. Bd. of Education.

Mo., Triplett—Triplett Township, Chariton County, voted \$70,000 road bonds.

N. C., Concord—City, Bd. of Aldermen, authorized \$60,000 bond issue: \$40,000, sewer; \$20,000, paving.

N. C., New Bern—Refunding—City, F. T. Patterson, Clk., receives bids May 27 for \$80,000, \$1000 denom. not to exceed 6% bonds.

Okla., Frederick—Frederick Consolidated School Dist. No. 13 plans voting soon on bonds for \$15,000 school; Will G. Weaver, Clk. Bd. of Education.

Okla., Geary—Geary School Dist. votes soon on \$18,500 bonds.

Okla., Guthrie—City council plans \$450,000 bond election soon for gas distribution system, fire equipment, waterworks extension, flood control of Cottonwood River.

Okla., Holdenville—Holdenville School Dist. considering \$36,000 bond election.

Okla., Muskogee—School—City voted \$200,000 bonds; John Porter, Pres. Bd. of Education. 2-27

Okla., Olustee—School—City, reported, voted \$35,000 bonds.

Okla., Tulsa—City, Dan W. Patton, Mayor, plans receiving bids soon, for \$1,175,000 municipal bonds; K. R. Teis, City Engr.

Okla., Watonga—City Hall—City voted \$40,000 bonds. 5-1

S. C., Gaffney—Cherokee County Comms., Joe H. Hall, Clk., receive bids June 3 for \$75,000, \$1000 denom., not to exceed 6% funding bonds.

Tenn., Covington—School—Town, J. A. Shelton, Mayor, receives bids May 28 for \$50,000, \$500 denom. not to exceed 6% bonds. 5-15

Tenn., Huntingdon—Road—Carroll County defeated \$350,000 bond issue; lately noted election May 8. 4-17

Tenn., Memphis—City, D. C. Miller, Clk., plans receiving bids July 1 for \$860,000 bonds: \$400,000, street; \$460,000, funding. 5-1

Tex., Crockett—Road—Houston County Comms., Court, K. L. Moore, Judge, rejected bids for \$500,000, 5% \$1,000 denom. Consolidated Road Dist. No. 2 bonds; lately noted bids May 5. 6-1

Tex., Dalhart—City voted \$80,000 bonds; Howard A. Finch, Supt., public schools. 4-17

Tex., Eagle Pass—Maverick County Water Improvement Dist. No. 1, T. S. Wyche, Sec., probably issue about January, 1931, \$1,800,000 bonds toward construction remainder of Main Canal and main lateral system.

Tex., Edna—Jackson County Drainage Dist. No. 8, plans voting \$78,000 drainage bonds.

Tex., Fort Worth—City, O. E. Carr, Mgr., receives bids May 27 for \$1,450,000, 4½% bonds. 5-15

Tex., Fort Worth—Police Station—City, O. E. Carr, Mgr., plans voting bonds in fall.

Tex., Grand Saline—City voted \$50,000 school bonds. 5-15

Tex., Greenville—School—City, Joseph F. Nichols, Mayor, votes May 27 on \$15,000 bonds; L. C. Gee, School Supt.

Tex., Highland Park, Dallas—Highland Park voted \$150,000 bonds; H. E. Gable, Supt. of Schools.

Tex., Houston—City, W. E. Monteith, Mayor, plans selling part of \$1,000,000 sewer bonds, recently voted; G. L. Fugate, Acting City Engr.

Tex., Livingston—Paving—City, O. Morrison, Mayor, receives bids May 27 for \$25,000, 5½%, \$1,000 denom. bonds. 5-1

Tex., Mason—Mason Independent School Dist., Walter M. Martin, Sec., plans receiving bids about May 15 or later, for \$20,000, 5%, \$1,000 denom. bonds. 5-15

Tex., Mercedes—Bd. of Education, Fred Johnston, Sec., receives bids May 27 for \$250,000, 5%, \$1,000 denom. Mercedes Independent School Dist. bonds. 5-15

Tex., Nacogdoches—Paving—City, R. C. Monk, Sec., votes June 16 on \$50,000 bonds.

Tex., Odessa—Hospital—Ector County votes May 26 on \$65,000 bonds.

Tex., Rio Grande—Road—Starr County voted \$160,000 bonds.

Tex., San Antonio—City, C. M. Chambers, Mayor, voted \$4,975,000 bonds: \$600,000 permanent storm and sanitary sewer system; \$750,000, street widening, opening and extensions; \$1,000,000, street paving; \$175,000, bridges; \$600,000, police and fire dept.; \$700,000, parks and Winburn Field; \$150,000, annex to hospital; I. Ewig, City Engr. 4-10

Tex., Shallowater—Shallowater Independent School Dist. voted \$55,000 bonds; T. C. Calley, Pres. School Bd. 5-8

Tex., Uvalde—City votes May 28 on \$60,000 bonds: \$25,000, street; \$10,000, airport site and improvements; \$25,000, city hall.

Tex., Woodville—Tyler County, J. E. Sturrock, County Judge, votes June 14 on \$300,000 Road Dist. No. 2 bonds. 4-3

Va., Cape Charles—Town votes June 10 on \$25,000 bonds for municipal building.

Tex., Bellville—Bellville Independent School Dist., Austin County, reported, voted \$20,000 bonds.

Va., Norfolk—Asst. Director of Finance A. Preston Breedon, advises \$300,000 bridge bonds authorized by City Council, will probably be offered for sale late this year or early in 1931.

Va., Portsmouth—City, Frank A. Harahan, Mgr., plans selling, soon, \$375,000 notes.

Va., Richmond—City, Landon B. Edwards, City Comptroller, receives bids June 9 for \$2,035,000, 4½%, \$1000 denom. bonds: \$500,000, street; \$400,000, sewer; \$635,000, school; \$250,000, general improvement; \$150,000, gas works; \$100,000, water.

Va., Newport News—City votes June 10 on

\$182,000 bonds; \$2000, school addition; \$50,000, park and playgrounds; \$50,000, City Prison Farm Barracks; \$80,000, armory.

Bond Issues Sold

Ala., Montgomery—City, W. A. Gunter, Mayor, reported, sold \$250,000 public improvement bonds to Rogers Caldwell & Co., Inc., New York City.

Ark., Pine Bluff—Library—City, R. E. Lee, Clk., sold \$65,000 bonds, jointly, at 100.13 to Caldwell & Co., Nashville, Tenn., and Merchants and Planters Title & Investment Co., Pine Bluff. 5-8

Miss., Friar Point—Coahoma County Bd. of Suprs. sold \$100,000, 5% county bonds to Art Securities Co., Memphis, Tenn., at \$1,750 premium.

Miss., Jackson—Courthouse—Hinds County Bd. of Suprs., W. W. Downing, Clk., sold \$200,000, 4½% Series "C" bonds to Saunders & Thomas Co., at premium of \$102. 4-24

Mo., St. Charles—St. Charles County Bd. of Education sold \$70,000, 4½% school dist. bonds to Lafayette-South Side Bank & Trust Co. of St. Louis at 103.26. 5-1

N. C., Carthage—Bridge—Moore County Comms., W. A. Harrington, Clk., sold \$50,000, 5% bonds to Braun, Bosworth & Co., Toledo, at \$531 premium. 5-1

N. C., Louisville—Public Improvement—Town, A. W. Green, Clk., sold \$30,000 bonds to Spitzer, Rorick & Co., Toledo. 5-1

N. C., Winston-Salem—City sold \$500,000, 3¾% tax anticipation notes to R. J. Reynolds Tobacco Co., Winston-Salem, at \$150 premium.

Okla., Doxey—Beckham County sold \$22,000, 5 and 5¼% Doxey Consolidated School Dist. bonds to Brown-Crummer Co., Wichita, Kan., at \$12 premium.

Okla., Tipton—City sold \$20,000 water and sewer bonds, jointly, to C. Edgar Honnold and Piersol Bond Co., both Oklahoma City. 4-24

South Carolina—State of South Carolina, J. H. Scarborough, State Treas., reported, sold \$3,500,000 tax anticipation notes to Central Union Bank of South Carolina, for Barr Bros. & Co., Inc., New York, at \$38 premium.

Tenn., Cleveland—Paving—City, reported, sold \$55,560, 6% bonds to Little, Wooten & Co., Jackson, Tenn., at \$2000 premium.

Tex., Big Spring—Howard County purchased \$15,000, 5% Consolidated School Dist. No. 8 bonds.

Tex., San Angelo—School—City, E. E. Lowrie, Mgr., sold \$150,000, 5% bonds to Well, Roth & Irving Co., Cincinnati, at par, accrued interest and \$212.50 premium. 5-8

New Financial Corporations

Ala., Evergreen—Peoples Bank of Evergreen formed by consolidation of Peoples Bank of Evergreen and First National Bank of Evergreen, with aggregate capital, surplus and profits totaling over \$340,000; A. Cunningham, Pres.; J. D. Wright, Cashier; will improve building.

Ark., Camden—Citizens Bank & Trust Co., capital \$50,000, chartered; J. D. Reynolds, Pres.

Fla., Ocala—Monroe & Holly Corporation, capital \$25,000, chartered; Colon Monroe, H. P. and Lois Holly; mortgages and notes.

Fla., St. Augustine—Peoples Bank for Savings, capital \$25,000, reopened; J. D. Puller, Pres.

Fla., West Palm Beach—Florida Bank & Trust Co., capital \$100,000, chartered; John J. Dutel, Pres.; I. G. Atwell, V.-P.; Omer E. Lannon, Cashier.

Mo., St. Louis—Commercial Investment Co., capital \$250,000, chartered; Edmond A. Garesche, Merchants-Laclede Bldg.

N. C., Faison—Bank of Faison, capital \$25,000, reorganized; I. W. Lane, Pres.

Va., Clifton Forge—Industrial Loan Co., capital \$100,000, chartered; J. W. C. Johnson.

First National Bank & Trust Co., I. L. Cook, Cashier, Orlando, Fla., plans increasing capital, \$100,000 to \$200,000.

Gulf States Investment Co., Mobile, Ala., has opened offices at 822 First National Bank Bldg., Montgomery, for Central Alabama Dist., with W. P. Kranz, Dist. Mgr.

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\$3,750,000 Gas Pipe Order

Birmingham, Ala.—The Southern Natural Gas Corporation, Birmingham, recently placed orders for \$3,750,000 worth of pipe for use in extension of its gas transmission system to involve a total expenditure of \$15,000,000, as previously announced. Orders were placed with the National Tube Co., Pittsburgh, Pa., for approximately \$2,375,000 worth of pipe and to the A. O. Smith Corp., Milwaukee, Wis., for more than \$1,000,000 worth. Additional orders will soon be placed. Construction has begun on extensions to carry natural gas into Mobile, Selma, Montgomery, Auburn and Opelika, Ala.; Macon, Milledgeville and Griffin, Ga.; and Jackson, Biloxi, Pascagoula, Laurel, Hattiesburg and Moss Point, Miss.

\$500,000 Richmond Harbor Facilities Needed

Richmond, Va.—Immediate needs of the Richmond harbor call for increased docking facilities and other improvements to cost about \$500,000 and the Department of Public Works is making an investigation to determine whether it will be more economical and better to install slips in the harbor instead of alongside the wharf. In a special report to Mayor Bright, R. Keith Compton, director of public works, states that river traffic has increased to such an extent that the improvements outlined are essential in order to retain a big barge trade now using the wharf. The city owns 750 feet of shore line with only 248 feet occupied by the new city wharf and Harbor Master Reynolds urges that the wharf be completed for the entire distance. In addition to the wharf extension, other needs pointed out are a warehouse for merchandise and perishable goods, railroad tracks at the wharf and the removal of a coffer dam in the old Trigg shipyard.

Commercial Stocks of Coal Smaller

Commercial stocks of bituminous coal used largely for industrial purposes amounted to 33,100,000 tons on April 1, 1930, according to the quarterly survey by the Bureau of Mines. In comparison with amount on hand at beginning of the previous quarter, this is a decrease of 7,200,000 tons and is 3,800,000 tons less than the quantity in storage on the same date last year.

Weekly rate of home consumption during the first quarter amounted to 10,432,000 tons compared with 10,782,000 tons in the previous quarter. In comparison with the same period last

year the rate of home consumption plus exports shows a decrease of 883,000 tons, a decline of 7.7 per cent.

In addition to stocks in the hands of consumers, there were 3,976,910 tons of bituminous coal on the docks of Lake Superior and Lake Michigan on April 1, compared with 8,026,065 tons on January 1.

New Train Service Baltimore-Chattanooga

New trains Nos. 17 and 18 to provide additional through service between Baltimore and Chattanooga were recently put in service by the Southern Railway System in connection with the Pennsylvania Railroad. The operation of these trains will effect convenient schedules between New York, Philadelphia, Baltimore, Washington and Knoxville, Chattanooga, Birmingham, New Orleans, Nashville and Memphis. A southbound train leaving New York at 11.10 A. M. is scheduled to leave Baltimore at 3.20 P. M. and arrive at Chattanooga at 9 o'clock the next morning.

Midland Natural Gas Company

Charleston, W. Va.—The Midland Natural Gas Company, New York, recently incorporated, is offering through E. R. Diggs & Co., Inc., New York, 115,000 shares of participating class A stock. The company will acquire and operate directly or through subsidiaries natural gas producing properties in Pennsylvania and West Virginia, aggregating more than 15,600 acres. Officers include Edward R. Berry, president; Edward H. Tatum, vice-president; W. L. Scott and John Eoghan Kelly, vice-presidents; John Grinwis, assistant secretary and assistant treasurer, and R. E. Brennan, assistant treasurer.

Du Pont Group Secures Daytona Bank

Daytona Beach, Fla.—Interests identified with Alfred I. du Pont, Jacksonville, have acquired control of the Daytona Bank and Trust Co., according to C. D. Dyal, president. As soon as legal requirements have been complied with the name of the institution will be changed to that of the Florida Bank and Trust Company at Daytona Beach. Present policies will be continued except that the trust business will be hereafter handled by the Florida National Bank of Jacksonville, another du Pont institution. No change will be made in the personnel, Mr. Dyal continuing as president; J. A. Clark, vice-president; B. P. Cordell, cashier, and J. W. Cordell, assistant cashier.

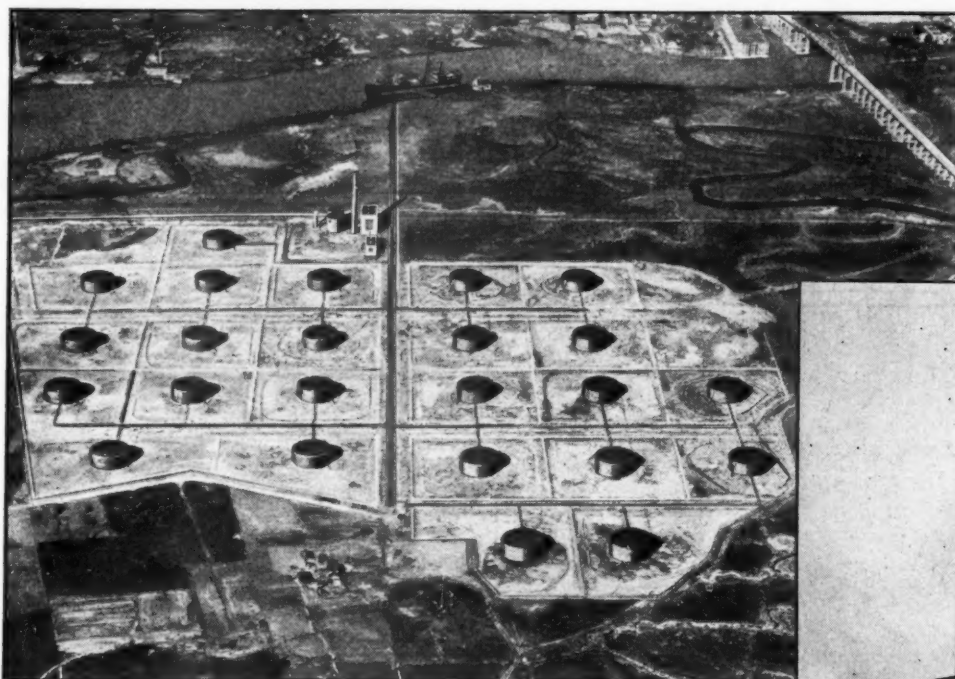
BIG STEEL MERGER COMPLETED

American Rolling Mill Company and Sheffield Steel Corporation Combine

According to an announcement by George M. Verity, chairman, and Charles R. Hook, president of the American Rolling Mill Co., Middletown, Ohio, and W. L. Allen, president of the Sheffield Steel Corp., Kansas City, Mo., directors of the two companies have concluded negotiations for combining their interests. When the combination has been effected finally the production of the American Rolling Mill Co. will be augmented by the addition of merchant bars, billet and rail steel reinforcing bars, bolts, nuts, rivets, spikes, tie plates, oil field and railroad forgings and bar iron, barbed wire and nails. It will also give this company immediate production at Kansas City of blue annealed sheets, the Sheffield Corporation already having two blue annealed jobbing mills in operation with a range of size up to 72 inches in width.

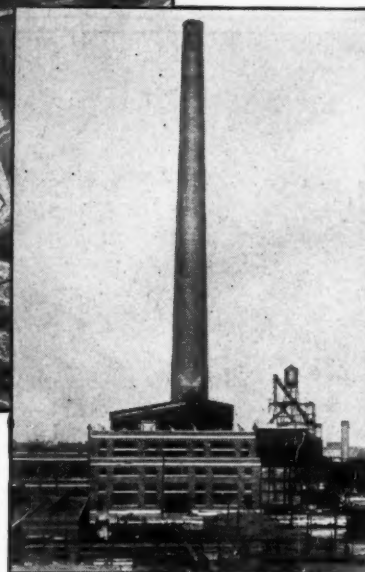
The consolidation will provide for a greater diversification of products for the rolling mills company. There is a heavy Western demand for its products, consisting of basic open hearth steel, sheet bars, Armco ingot iron, galvanized sheets and sheet steel building materials, and this combination would seem to widen its field operations. The combined companies will have plants at Middletown, Zanesville and Columbus, Ohio; Ashland, Ky.; Butler, Pa.; Kansas City and Oklahoma City. In addition to its two blue annealing mills, the Sheffield company operates four open hearth furnaces, a bar-iron and rail and rerolling mill, bolt, nut and forging works, wire mill, bar and rod mill and a blooming mill. The capacity of the plants is in excess of 200,000 tons annually. The American Rolling Mill Co. has an annual capacity of 550,000 tons of pig iron, 1,500,000 tons of ingots and 1,110,000 tons of sheet metal products.

The acquisition of Sheffield by the Ohio company continues the extensive expansion of that organization. Among other companies it has purchased since it was founded in 1905 are Muskingum Valley Steel, Zanesville, O.; Columbus Iron and Steel; half-interest in Portsmouth By-Products Coke Co., Portsmouth, O.; ore lands in Minnesota and Michigan; Ashland Iron and Mining Co., Ashland, Ky.; Columbia Steel interests of Pittsburgh, Pa., and coal operations at Nellis and Marting, in Boone county, West Virginia.



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Building two plants for the Gulf Refining Company

A 1,920,000 barrel oil storage plant on Staten Island, and a power plant at Port Arthur, Texas, built simultaneously in fast time.

TO SERVE the New York market, the Gulf Refining Company required a new storage plant on Staten Island. At the same time a large new power plant was needed at the refinery at Port Arthur, Texas.

We were called in to design and build both plants.

The storage plant on Staten Island has a capacity of 1,920,000 barrels, occupies 110 acres, and includes twenty-four 80,000 barrel oil tanks, steam plant, two drainage pumping stations, oil pumping station, fire pump and substation, dock for oil tankers, 9 miles of oil pipe mains, 18 miles of foamite pipe, 8 miles of steam pipe, 4 miles of levees, 3 miles of streets and roads, 4 miles of

water mains, 2 miles of electric pole lines.

We did all this work—design and construction—with our own forces in six months' time.

The power plant at Port Arthur, designed to utilize refinery waste products—sludge oil and pulverized paraffin petroleum coke—contains 3 boilers of 15,400 sq. ft. each and a turbine of 10,000 kw. capacity. It was also built in six months.

As usual, the work was executed in close co-operation with the client's organization.

We are prepared to serve industrial companies in the design and construction of manufacturing plants, shops, foundries, storage buildings, power developments or work of almost any nature.

UNITED ENGINEERS & CONSTRUCTORS

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MAXIMUM RETURN TO CLIENTS PER DOLLAR INVESTED

TRAINED MEN GO FARTHER



SHOULDER to shoulder with industrial and business management, the International Correspondence Schools are training men for greater efficiency. Training them to do a better job *where they are*—and qualifying them for consistent promotion in the line of their employment.

Studying at night and during their spare time with this biggest of all educational institutions, one hundred and eighty thousand men are learning to be better salesmen, better mechanics, better executives—accountants—draftsmen—engineers.

Through I. C. S. instruction they are becoming worth more, to their employers and to themselves.

There is a growing appreciation of the value of employee training among far-sighted corporations. Instead of hiring skilled workers away from other firms, business management today is developing them *inside* the organization.

Personnel directors have been taking untrained men, studying their aptitudes, gauging their character, and training them for more responsible positions. The consequence invariably has been to increase efficiency and loyalty.

In line with this advance, great industrial and commercial corporations the country over have asked the International Correspondence Schools to help them select and train the right men. For these groups of employees special courses are arranged, combining the advantages of systematic shop work with chosen courses of study.

Today there are more than 2700 companies co-operating with the I. C. S. in this practical plan of vocational training. Among them are 335 railroads in the United States and Canada, and hundreds of industrial organizations, including large motor companies, steel works, electric plants, public utilities, coal and oil

companies, and chain store systems. A number of these concerns have a thousand men or more enrolled for I. C. S. instruction.

Over 2100 separate lesson units make possible flexible programs of training, adaptable to the exact needs of any business. And the International Correspondence Schools' system provides a variety of teaching methods, ranging from individual home study to supervised classroom instruction in the plant.

Whether a student enrolls through his employer or on his own initiative, it is the policy of the I. C. S. wherever possible to help him choose a course along the line of his daily work—to train him on the job—for the job.

We have prepared a booklet, "The Business of Building Men," containing further details of employee training under the I. C. S. plan. We shall be glad to send you a copy on request.

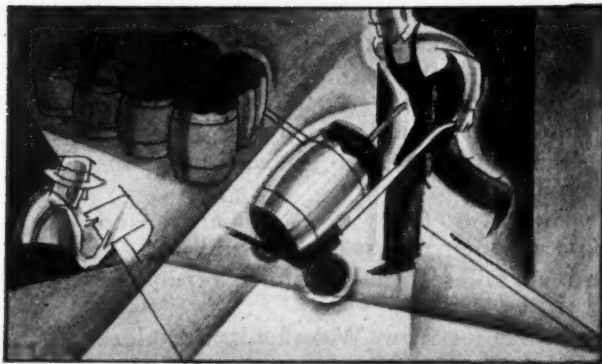
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FOUNDED 1891
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HOME STUDY COUNCIL

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Potato Special



Between Virginia, the Carolinas and the Mid-West

"THE POTATO SPECIAL"—a daily Norfolk and Western freight train, is operated from Norfolk, where direct interchange is made with the Norfolk Southern Railroad; and from Petersburg, point of direct interchange with the Atlantic Coast Line Railroad, to Cincinnati and Columbus, where connections are made with the trains of other lines serving the Mid-West.

This outstanding service provides *third morning delivery* at Cincinnati and Columbus from Virginia and Eastern Carolina shipping districts; and *fourth morning delivery* at Chicago, Cleveland, Detroit, Toledo, and other points similarly located.

Norfolk and Western Railway

Roanoke**Virginia**

Wonderful Bargain!

4,600 acres of land.
6 miles water front.
15 miles roads.
Taxes \$600 annually.

KINLOCH

About 3,000 acres.
Fronting about three miles on hard-surface road.
Twenty-eight miles east of Fredericksburg.
Sixteen miles from Milford, on R., F. & P. R. R., operating 30 passenger trains daily.
Eleven miles of good roads around this farm.
Main residence brick building, four years in construction (1845 to 1849), with eleven baths, water, electric light, and modern conveniences.
Italian marble mantels and finest plaster-of-paris work and woodwork.
Frame stables for thirty horses, barns, and garage, and all other necessary outbuildings.
About twelve miles from Stratford, birthplace of General Lee.
About fifteen miles from Wakefield, birthplace of General Washington.
Two hours ride by fast auto from Washington, the Capital of the greatest nation on earth.

This magnificent estate offered together with
PORT MICOU

About 1,600 acres.
Fronting six miles on Rappahannock River.
Duck marsh.
Wharf.

PICKWICK INN

9 miles South of Fredericksburg, Va., on the New York-Florida Highway. Near great battlefields of Chancellorsville, Wilderness and Spotsylvania. 400 acres. \$30,000.00.

SHELBOURNE PLANTATION

15 miles from Fredericksburg, Va., on the main King's Highway, and on Rappahannock River. House (brick and frame) has lights, water and sewerage, and 5 baths, all modern plumbing. 100 acres. \$25,000.00.

MOUNT STUART

20 miles east of Fredericksburg, Va., near Potomac River. Brick and frame dwelling, electric lights, water and sewerage, with 6 baths and all modern plumbing. 200 acres. \$30,000.00.

*Card to inspect property
can be had by addressing*

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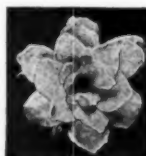
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Manufacturing in the South

is growing at an amazing rate. Over six billion dollars are spent annually for materials, supplies, fuel and power to operate Southern factories. The utilization of its power resources; great hydroelectric sites; fuel supply of coal, lignite, gas and oil is rapidly advancing Southern industry.

MANUFACTURERS RECORD
BALTIMORE, MARYLAND

The **STRUCTURAL STEEL**



for this new office building at
No. 1 North LaSalle St., Chicago,
was fabricated in our plant at
Gary, Indiana, from steel materials
produced by Illinois Steel Company
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United States Steel Products Company

30 Church Street
New York, N. Y.

\$3,000,000 Power Plant Started

Mobeetie, Tex.—Work was started a few days ago on a \$3,000,000 power plant near Shamrock for the Panhandle Power and Light Co., Borger, Tex., serving a number of towns and cities in the Texas and Oklahoma panhandle. Construction plans include a plant of sufficient capacity to relieve the company's plant at Borger of a large part of the load now being carried by that unit. Seven 5-room houses will be erected. The plant will consist of one unit of 6500 kw.; steam pressure, 250 pounds; natural gas fuel. It will supply current to the company's 66 kv. transmission line out of Borger. A. B. Taylor, Mobeetie, is the construction engineer. The plant was designed by the United Light & Power Engineering & Construction Co., Kansas City, Mo.

Building 7.2-Mile Rail Line

Polo, Mo.—As a part of the plan of the Chicago, Rock Island & Pacific Railway Company to build a new double track line from Trenton, Mo., to Kansas City, Mo., the company recently awarded

contract to the Winston Bros. Co., Minneapolis, Minn., to construct a 7.2-mile section from a point near Lawson to a point about 4 miles west of Polo. The contract also covers a bridge over Crooked Creek, 60 feet high, to involve 8800 cubic yards of reinforced concrete. A sub-contract for the team work and a part of the small shovel work has been awarded to Shugart & Blythe, Nevada, Iowa, while the heavier grading work and the construction of the bridge will be handled by the Winston Bros. Company.

\$500,000 Home for Aged Proposed

Plans for a new Home for the Aged of the Methodist Episcopal Church at Mount Washington, Baltimore, have been approved by the Board of directors of that institution, B. Frank Bennett, chairman. The building will be erected at Rogers and Green Spring avenues, and will cost about \$500,000. It will contain 175 rooms and baths. O. Eugene Adams, Baltimore, is the architect and George R. Bullen is chairman of the building committee.

\$44,420,455 APPROPRIATION BILL**Senate Approves District of Columbia Measure**

Washington, D. C.—The District of Columbia appropriation bill carrying a total of \$44,420,455 has been passed by the Senate and the measure now goes to a Senate and House conference. Appropriations provided by the bill will meet expenses of the District of Columbia during the next fiscal year, beginning July 1. One item covers the construction of the Farmers Produce Market in Southwest Washington at a cost of \$300,000, while another provides for an increased contribution toward the upkeep of the city from \$9,000,000 to \$12,000,000. The sum of \$1,000,000 was appropriated to acquire property in the municipal center area. An amendment was adopted authorizing the construction of a subway to eliminate the Chestnut street grade crossing and provision made for the repair of streets and to erect and repair schools.



PROPOSALS

BOND ISSUES BUILDINGS PAVING GOOD ROADS



Bids close June 3, 1930.

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., May 7, 1930.—SEALED BIDS will be opened in this office at 3 P. M., June 3, 1930, for the construction of two hollow tile silos at the U. S. marine hospital at Carville, La. Specifications may be obtained from the medical officer in charge or at this office in the discretion of the supervising architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close June 12, 1930.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., May 13, 1930.—SEALED PROPOSALS will be opened in this office at 3 P. M., June 12, 1930, for furnishing all labor and material required for new boiler, etc., in the U. S. Post Office at Aiken, S. C. Drawings and specifications may be obtained from the custodian at the U. S. Post Office at Aiken, S. C., or at this office, in the discretion of the Supervising Architect. JAS. A. WETMORE, Acting Supervising Architect.

Bids close January 24, 1930.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., May 15, 1930.—SEALED BIDS will be opened in this office at 3 P. M., June 24, 1930, for the construction of the U. S. Marine Hospital Buildings (except elevators and dumbwaiter), New Orleans, La. Drawings and specifications, not exceeding six sets, may be obtained at this office, in the discretion of the Supervising Architect, by any satisfactory general contractor and provided a deposit of \$50.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. JAS. A. WETMORE, Acting Supervising Architect.

GENERAL INFORMATION**About Proposal Advertising in Manufacturers Record**

PUBLICATION DAY: Thursday.
FORMS CLOSE: 10 A. M. Tuesday.

When too late to send copy by regular mail to reach us by 10 A. M. Tuesday, forward by night letter or air mail when possible.

THE DAILY CONSTRUCTION BULLETIN OF THE MANUFACTURERS RECORD

Published every business day, gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Construction Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened or when daily insertions are necessary to meet legal requirements.

The rate is the same for both publications—35 cents a line each insertion.

Bids close June 12, 1930.

War Department, Office Constructing Quartermaster, Fort Bragg, N. C. Sealed proposals in triplicate will be received until 10 A. M., June 12, 1930, and then publicly opened, for the installation of night flying lighting system at Pope Field, Fort Bragg, North Carolina. \$25.00 deposit certified check, payable to Treasurer of United States, required for drawings, etc. Further information on request.

Bids close June 18, 1930.

DEPARTMENT OF THE INTERIOR, Washington, D. C., May 19, 1930. Sealed bids, in duplicate, subject to the conditions contained herein, will be received until 2 P. M., Wednesday, June 18, 1930, and then opened, for (1) Furnishing all labor and materials for performing all work for the construction (including all mechanical equipment) of Buildings Nos. 1, 2 and 3 of the Women's Dormitory group at Howard University, Washington, D. C. This work will include excavating, reinforced concrete construction, brick work, stone work, floor and wall tile, miscellaneous iron and steel work, slate and metal roofing, lathing and plastering, carpentry, electric elevators, plumbing, heating, electrical installation, finish grading, concrete walks, landscaping. (2) Kitchen equipment, furniture, shades, draperies, etc., furnished and installed complete. Proposals will be considered only from individuals, firms or corporations possessing satisfactory financial and technical ability, equipment and organization to insure speedy completion of the contract, and in making awards the records of bidders for expedition and satisfactory performance on contracts of similar character and magnitude will be carefully considered. At the discretion of the Secretary, drawings and specifications may be obtained upon application to the department. A certified check in the sum of \$100, payable to the Treasurer of the United States, is required as security for safe return of the drawings and specifications within 10 days after the date of opening proposals. Each bidder must accompany his proposals with detailed financial statement of his construction organization. Envelope containing bids must be sealed, marked "Bid for construction, equipment and furnishing of women's dormitory buildings 1, 2 and 3, Howard University, Washington, D. C., to be opened June 18, 1930," and addressed to "The Secretary of Interior, Room 6117, Interior Department Building, Washington, D. C." JOHN H. EDWARDS, Assistant Secretary of the Interior.

Bids close May 31, 1930.

U. S. Engineer Office, Jacksonville, Fla.—Sealed bids, in duplicate, will be received here until 12 noon, May 31, 1930, and then publicly opened, for furnishing all labor and materials and performing all work for repairing north and south jetties at the entrance to the St. Johns River, Fla. Approximately 45,000 tons of stone to be placed. Further information on application.

Bids close June 2, 1930.

Highway Bridge

Norfolk, Virginia.

Sealed proposals will be received at the office of the Director of Public Works, City of Norfolk, until 12 o'clock noon, June 2nd, 1930, for the construction of a highway bridge across the northerly arm of Lafayette River between Granby Street and Lakewood. The contract will include approximately

250 piers
140 tons steel work
500 yards of concrete
40 M. feet of lumber

Plans and specifications, together with proposal, contract and bond forms, may be had at the above office on May 20th upon deposit of \$10.00, one-half of which will be refunded upon return of plans and forms within ten days after bid date.

Each bid must be accompanied by a proposal bond or a certified check, payable to B. Gray Tunstall, City Treasurer, in the sum of \$3000.00. Out-of-town bidders should submit data as to their equipment and ability to perform the work.

The City of Norfolk reserves the right to reject any or all bids and to accept any proposal which is considered to serve the best interest and secure the greatest advantage to the city.

WALTER H. TAYLOR, 3RD,
Director of Public Works.

Bids close May 27, 1930.

Maryland Highway Work

DEPARTMENT OF PUBLIC WORKS
STATE OF MARYLAND
STATE ROADS COMMISSION

NOTICE TO CONTRACTORS

Baltimore, Md.

SEALED PROPOSALS for building six sections of State Highway as follows:

Baltimore City, Contract No. BC-90-74—One section of State Highway along Cold Spring Lane, from Falls Road to Green Spring Avenue, a distance of 1.1 miles (sheet asphalt).

Carroll County, Contract No. Cl-82-54—One section of State Highway from Day toward Winfield, a distance of 1.0 mile (macadam).

Charles County, Contract No. Ch-81-84—One section of State Highway from the end of Contract No. Ch-68 south of Faulkner to Pope's Creek, a distance of 1.0 mile (gravel).

Charles County, Contract No. Ch-82-82—One section of State Highway from the end of Contract No. Ch-69 near Pomfret to Pomonkey, a distance of 1.19 miles (gravel).

St. Mary's County, Contract No. SM-62-84—One section of State Highway from the end of Contract No. SM-50 south of Hollywood toward California, a distance of 1.0 mile (gravel).

Worcester County, Contract No. Wo-72-12, Federal Aid Project 212—One section of State Highway from Friendship to the Berlin-Ocean City Road, a distance of 1.6 miles (concrete).

Will be received by the State Roads Commission at its offices, Federal Reserve Bank Building, Calvert and Lexington Streets, Baltimore, Maryland, until 12 M., E. S. T., on the 27th day of May, 1930, at which time and place they will be publicly opened and read.

Bids must be made upon the blank proposal form which, with specifications and plans, will be furnished by the Commission upon application and cash payment of \$1.00, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of Five Hundred (\$500) Dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

BY ORDER of the State Roads Commission this 13th day of May, 1930.

G. CLINTON UHL, Chairman.
L. H. STEUART, Secretary.

Bids close June 2, 1930.

Paving

Marshall, Texas.

Sealed bids or proposals for the paving of certain streets in the City of Marshall, Texas, will be received by the City Commissioners in their offices at the City Hall, Marshall, Texas, until 2 P. M. June 2, 1930, when the bids received will be publicly opened and read.

The principal items are:
Unclassified Excavation.....94,736 Sq. Yds.
12-inch pipe in Place.....3,827 L. F.
15-inch Pipe in Place.....5,792 L. F.
18-inch Pipe in Place.....2,435 L. F.
21-inch Pipe in Place.....264 L. F.
24-inch Pipe in Place.....395 L. F.
Catch Basins, Complete.....117
Manholes, Complete.....16
Trench Excavation, unclassified.....500 C. Y.
1:2:4 Formed Concrete.....200 C. Y.
1:3:6 Unformed Concrete.....100 C. Y.
Reinforcing Steel, in place.....10,000 Lbs.
Concrete Curb and Gutter.....38,622 L. F.
Concrete Curb only.....38,622 L. F.
Concrete Gutter only.....700 L. F.
Paving, Complete.....84,016 S. Y.
Sidewalk Restoration.....580 S. Y.

Alternate bids will be received on several types of pavement. Forms containing information for bidders, form of proposal, contract, specifications and plans may be obtained by intending bidders by depositing \$10.00 for same. Right is reserved to reject any or all bids or waive any informality in any bid.

P. M. HERNDON,
City Secretary.

W. C. ALBRIGHT,
City Engineer.

Bids close May 30, 1930.

Excavation for Drainage

Birmingham, Ala.

Sealed proposals will be received by the undersigned until 10 o'clock A. M. Friday, May 30, 1930, for certain earth and rock excavation which is proposed to be done by the City of Birmingham on Section One of Village Creek drainage project. (From a point approximately 4800 feet west of the Western City Limits of Birmingham to Avenue F. Ensley.) The approximate principal quantities being as follows:

79,600 Cu. Yds. Earth Excavation; 36,400 Cu. Yds. Rock Excavation; 500 Sq. Yds. Rin-Rap Masonry.

Specifications may be obtained and plans examined at this office. The right is reserved to reject any or all proposals.

A. J. HAWKINS, City Engineer.

Bids close June 10, 1930.

Storm Sewer

Port Arthur, Texas.

Sealed proposals addressed to the City Commission of Port Arthur, Texas, will be received at the office of the City Clerk until 10 A. M., June 10, 1930, and at that time publicly read, for furnishing all necessary materials, equipment and labor necessary to construct the Thomas Boulevard Storm Sewer.

The principal approximate quantities are as follows:

2,902 feet 72-inch reinforced concrete pipe.
314 feet 36-inch reinforced concrete pipe.
414 feet 30-inch reinforced concrete pipe.
3,484 feet 24-inch reinforced concrete pipe.
6,728 feet reinforced concrete culverts, sizes 6 ft. by 7 ft. to 9 ft. by 12 ft.
16,478 cubic yards excavation.
13,676 cubic yards backfill.

Each bid must be accompanied by a certified check (payable to the City of Port Arthur, Texas), for an amount equal to 5% of the total bid.

Plans and specifications are on file in the office of the City Clerk at the City Hall, Port Arthur, Texas. Copies may be secured from the City Engineer at the City Hall at a cost of \$15.00, which will not be returned.

The City of Port Arthur, Texas, reserves the right to reject any or all bids.

J. W. O'NEAL, Mayor.
F. H. DRUNAGEL, Commissioner.
C. B. MOORE, Commissioner.
J. C. HAMILTON, City Clerk.
W. O. BOWER, City Engineer.

Bids close June 18, 1930.

TREASURY DEPARTMENT, office of the Supervising Architect, Washington, D. C., May 14, 1930.—SEALED BIDS will be opened in this office at 3 P. M., June 18, 1930, for the construction of the U. S. Post Office at Buena Vista, Va., Drawings and specifications, not exceeding six sets, may be obtained at this office, in the discretion of the Supervising Architect, by any satisfactory general contractor, and provided a deposit of \$15.00 is made for each set to assure its prompt return. Checks offered as deposits must be made payable to the order of the Treasurer of the United States. JAS. A. WETMORE, Acting Supervising Architect.

Bids close June 5, 1930.

Virginia Highway Work

Richmond, Va.

Thursday, 10 A. M. Office of the Va. Dept. of Highways, Richmond, Va. Rt. 15, Proj. F111, 3—120 ft. Truss Spans and 1—400 ft. Cantilever, Cu. Yds. A Conc. 1194, Lbs. Reinf. Steel 103,105, Struc. Steel 885,000, Rt. 32, Proj. 184, 0.6 Mi. Gr. and Dr., Cu. Yds. Excav. 10,659, Rt. 26, Proj. 338-406, 8000 Cu. Yds. Excav., 102,489 Sq. Yds. Mac., 9.3 Mi. Rt. 17, Proj. 380-449, 10 Mi. Gr. and Dr., 180,000 Cu. Yds. Excav., 49,583 Lbs. Reinf. Steel, Rt. 23, Proj. 435, Cu. Yds. Excav., 3000 Sq. Yds. Mac., 31,000, 3 Mi. Rt. 44, Proj. 587, Cu. Yds. Excav., 107,759; 19,664 Lbs. Reinf. Steel, 20,663 Cu., Yds. Soil, 6.3 Mi. Rt. 13, Proj. 662A, 9537 Cu. Yds. Excav., 2906 Cu. Yds. Soil, 0.87 Mi. Details obtainable upon request.

Bids close July 7, 1930.

Medical Center

WESTON STATE HOSPITAL,
WESTON, W. VA.

Charleston, W. Va.

Sealed bids will be received by the State Board of Control at its office in Charleston, W. Va., until 3 P. M. Monday, July 7, 1930, for doing all the work and furnishing all the materials necessary to complete the building described below, according to the plans and specifications prepared by R. A. Gillis, Architect, Fairmont, W. Va.

Public opening of bids will be held at the above named date and award of contract made as soon thereafter as possible. The State Board of Control reserves the right to reject any or all bids.

The building is to be 54 ft. 3 in. wide by 197 ft. 8 in. long; three stories in height, no basement. Foundation concrete; exterior faced with smooth red brick, trimmed in Bedford limestone; face of all interior walls salt glazed brick; floor and ceiling construction concrete joist, with tile filler; roof construction frame, covered with slate. Stairways and ramps to be concrete; finished floors cement, terrazzo and tile. Wood doors and trim. Plaster on ceilings only.

Heating, Plumbing and Electric Work will be awarded in separate contracts. Part of the building will be heated with radiators; rooms, wards and corridors with warm air, fan system.

Plans, specifications and blank form for bids will be mailed to General Contractors, and also Mechanical Contractors, when request is accompanied with check in the sum of Twenty-five Dollars (\$25.00), WHICH AMOUNT WILL BE REFUNDED ONLY ON RECEIPT OF BONA FIDE BID and the return of the plans and specifications. If plans are held until of no further use to us in this letting, and bid is NOT submitted, the deposit check will be forfeited. However, if for any reason you find upon receipt of the plans that you cannot submit a bid, if the plans are returned to us promptly your deposit will be refunded.

Material firms may secure plans and specifications, if we have them to spare, when request is accompanied with check in the amount of \$25.00, of which amount \$10.00 will be refunded upon the return of the plans.

Bids must be accompanied with certified check, made payable to the State Board of Control, for an amount equal to one per cent (1%) of the bid as guarantee of good faith.

Surety Bond, according to our law, will be required of the successful bidder in the amount of the contract price. Address all correspondence to

STATE BOARD OF CONTROL,
Charleston, Kanawha County,
West Virginia.

CLASSIFIED OPPORTUNITIES

MINERAL AND TIMBER LANDS, WATER POWER, MISCELLANEOUS PROPERTIES

FOR SALE—20,000 acres Mineral and Timber Land, Southern Tennessee. Only \$5 an acre.
BOX 103, LAKE JOVITA, FLORIDA.

FOR SALE—Factory Sites, City Property, Water Frontage, Tracts for Suburban Development. Timber Lands and Colonizing Lands. H. H. Wefel, Jr., Mobile, Alabama.

CLAY MINE

FOR SALE—Clay mine producing Ball and Sagger Clay, also all machinery, buildings, etc. It must be sold on account of liquidation. Address No. 9004, care of Manufacturers Record, Baltimore, Md.

COAL LANDS AND MINES

50,000 ACRES COAL LANDS, \$5.00 per acre. East Tennessee. On railroad; good markets North and South, with favorable freight rates. Excellent steam, domestic, by-product coals, 3 to 10 ft. seams. Producing mines on property withheld from sales. Excellent opportunity for safe, long time investment, operating or leasing. Address No. 8090, care Manufacturers Record.

TIMBER AND TIMBER LAND

TIMBER LANDS

23,000 acres Pine lands in South Georgia, intersected by Hard Surfaced Federal Highway and Trunk Line Railroad near large town; 18,000,000 feet Pine Timber on one-third of area; balance has quantities of fine young, rapid-growing Pine Timber. Excellent possibilities for turpentine and timber, also good tobacco land. Price only \$7.00 per acre. For particulars address P. O. Box 554, Savannah, Georgia.

FARM, FRUIT AND TRUCK LANDS

GEORGIA

FOR SALE—500 acres very cheap land in the fast developing tobacco section of Georgia; growers doing well in that vicinity. Address No. 9001, care of Manufacturers Record, Baltimore, Md.

LOUISIANA

ST. CHARLES PARISH, LOUISIANA, offers opportunities in cattle ranches, agricultural and industrial sites. St. Charles Bank & Trust Co., Sellers, La.

SOUTH CAROLINA

5500 ACRE FARM, 75 buildings, stock, equipment; a profitable enterprise in South Carolina to be sold to settle estate. Excellent crop records on tobacco, asparagus, grain, cotton. R. R. station on property; valuable timber; \$20 an acre, with liberal terms to responsible purchaser. No. 9007, care of Manufacturers Record, Baltimore.

TEXAS

RIO GRANDE VALLEY—10-acre citrus grove, paying 20 per cent on valuation; modern home. Write for details and pictures. A. V. BROWN, Harlingen, Tex.

VIRGINIA

RIVER FARM FOR SALE OR EXCHANGE—750 acres, brick mansion, two stock barns, several tenant houses, 125 acres rich bottom land, 325 acres fine upland, 300 acres timber. Good neighborhood. Low price.
GEO. V. VENABLE & CO., Lynchburg, Va.

SOUTHERN ESTATE

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Stacks from 30" to 50" diameter

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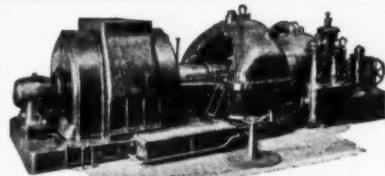
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6-10-12-15-17 and
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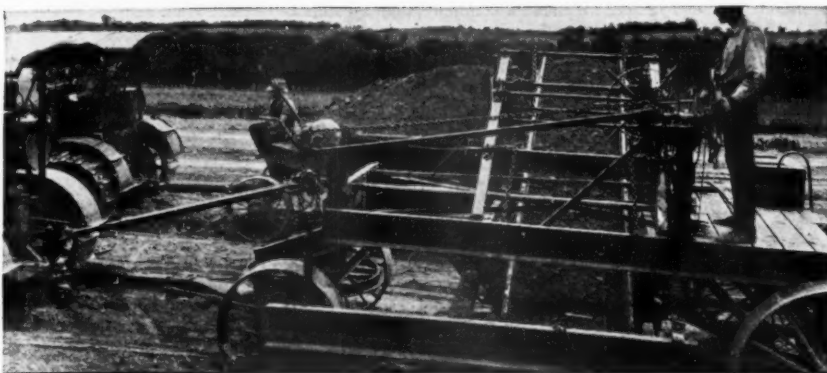
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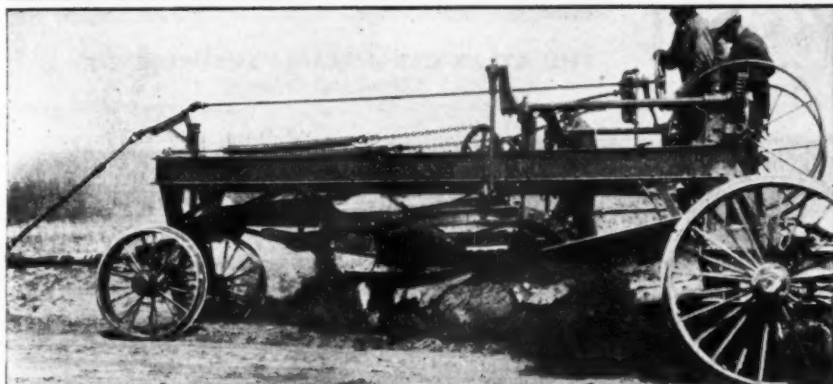


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The "Caterpillar" Super-Mogul Grader has tremendous capacity in the toughest soils.



A "Caterpillar" Tractor and "Caterpillar" Grader daily form miles of perfect flat bottom ditches like this.



A "Caterpillar" one-man Motor Patrol keeps the finished road smooth and, lasting at small expense.

Prices—f. o. b. Peoria, Illinois

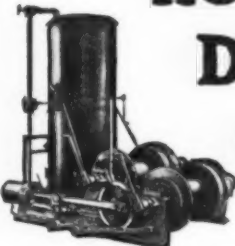
TEN . .	\$1100	TWENTY	\$1900
FIFTEEN	\$1450	THIRTY.	\$2375
SIXTY .	\$4175		

Caterpillar Tractor Co.

PEORIA, ILL. and SAN LEANDRO,
CALIF., U. S. A.

Track-type Tractors Combines Road Machinery
(There's a "Caterpillar" Dealer Near You)

CATERPILLAR
REG. U. S. PAT. OFF.
TRACTOR



HOISTS DERRICKS CABLEWAYS

*AN INQUIRY WILL NOT
INCUR AN OBLIGATION*


STREET BROS. MACHINE WKS. INC.
Chattanooga, Tenn.



Manufacturers of Rails, Frogs, Switches, for Permanent and Portable Track. Complete line of Steel Posts for Fence and other purposes.

Catalog will be sent on request

SWEET'S STEEL COMPANY
MANUFACTURERS
WILLIAMSPORT PENNA.



Owen Buckets

Stronger and Built to Last Longer, Owen Buckets get "A Mouthful at Every Bite" and More Bites Per Day.

OWEN BUCKET CO.
901 BREAKWATER AVE. CLEVELAND, OHIO

INDUSTRIAL CAR EQUIPMENT



THE ATLAS CAR & MANUFACTURING CO.
Cleveland, Ohio



Hayward Buckets


"Dig for all the World"

THE HAYWARD COMPANY
50-52 Church St., New York, N.Y.



WHITCOMB LOCOMOTIVES

2 to 100 TONS
GEAR DRIVE AND OIL-ELECTRIC
GASOLINE - DISTILLATE - DIESEL - BATTERY
Write for Bulletin and Performance Data
GEO. D. WHITCOMB CO.
ROCHELLE, ILLINOIS

BOTTOM DUMPING and TURN-OVER BUCKETS

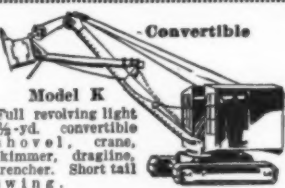
*Write us for information on
Contractors Buckets*

G. L. Stuebner Iron Works, Inc.
Manufacturers of Material Handling Equipment
So. Hancock St. Long Island City, N. Y.



CINCINNATI LOCOMOTIVES

for
INDUSTRIAL-CONSTRUCTION-SWITCHING
SERVICE
Locomotive Division
THE CINCINNATI CAR CORPORATION
Winton Place, Cincinnati, Ohio, U.S.A.



Model K
Full revolving light
1/2-yd. convertible
shovel. Crane,
skimmer, dragline,
trencher. Short tail
swing.

POWER SHOVELS Cranes, Trenchers SKIMMERS

Full or part circle

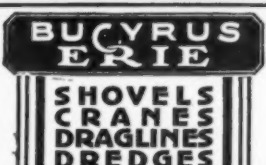
BAY CITY SHOVELS, Inc.
Bay City, Mich.



CARS KOPPEL TRACK

for all engineering and industrial uses

KOPPEL INDUSTRIAL CAR & EQUIPMENT CO.
KOPPEL, PA.
NEW YORK CHICAGO
SAN FRANCISCO PITTSBURGH



BUCYRUS ERIE

SHOVELS CRANES DRAGLINES DREDGES


KNOWN RELIABILITY!
Bucyrus-Erie equipment is known the world over, for dependable, low-cost operation. Shovels, Draglines, Cranes—all sizes—Gas, Diesel, Electric, Gas + Air, Diesel + Air, Steam. Also Railway Cranes, Spreader Plows, etc. Write for bulletins.

BUCYRUS-ERIE COMPANY
So. Milwaukee, Wis., Evansville, Ind., Erie, Pa.

ELLCOTT MACHINE CORPORATION

Hydraulic Dredges—Sand and Gravel Dredges
Pumps for Sand, Gravel, Dredging
Hydraulic Dredging Machinery
Heavy Machinery

1111 Bush Street BALTIMORE, MD., U. S. A.



SAUERMAN "CRESCENT" SCRAPER

The World's lowest cost long-range excavator.
Made in 15 sizes to handle from 10 to 600 tons per hour.

SAUERMAN BROS., INC.
940 S. Clinton St. Chicago

Hydraulic Dredges Dipper Dredges Sectional Steel Hulls and Barges

American Steel Dredge Co.
Fort Wayne, Indiana U. S. A.

CLYDE

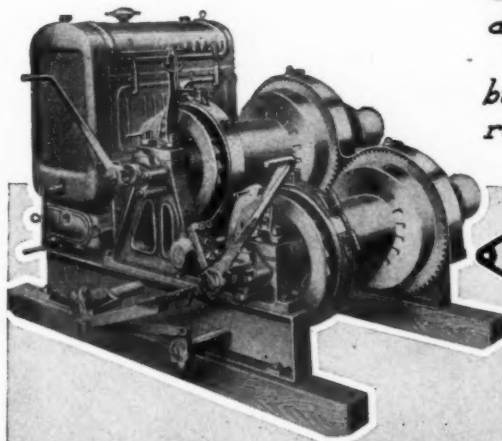
HOISTS - DERRICKS

Breaking Records :-

Time after time, Clyde hoists have broken records and established new marks for endurance and performance. Their exceptional stamina and efficiency enables the construction crews to push ahead at top speed day after day ; no shut down or delays to hold up the job.

On the bridge job near Fisk, Mo., S. J. Cohen set a new pile driving record for the state with his Clyde 35 horsepower, two drum gasoline hoist.

A new gasoline hoist bulletin gladly sent upon request.



CLYDE IRON WORKS SALES CO.

DISTRIBUTORS FOR CLYDE IRON WORKS DULUTH, MINNESOTA

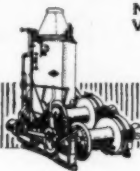
—BRANCHES—

NEW ORLEANS: 309 MAGAZINE ST.
 PORTLAND, OREGON: 555 THURMAN ST.
 SEATTLE: 3410 FIRST AVENUE SOUTH
 CHICAGO: 11 SO. LA SALLE STREET

MEMPHIS: 69 UNION AVENUE
 NEW YORK: 856 EAST 136TH STREET
 VANCOUVER, BRITISH COLUMBIA
 1325 STANDARD BANK BLDG.



TWO MARKS OF



GUARANTEED QUALITY



A One-Man



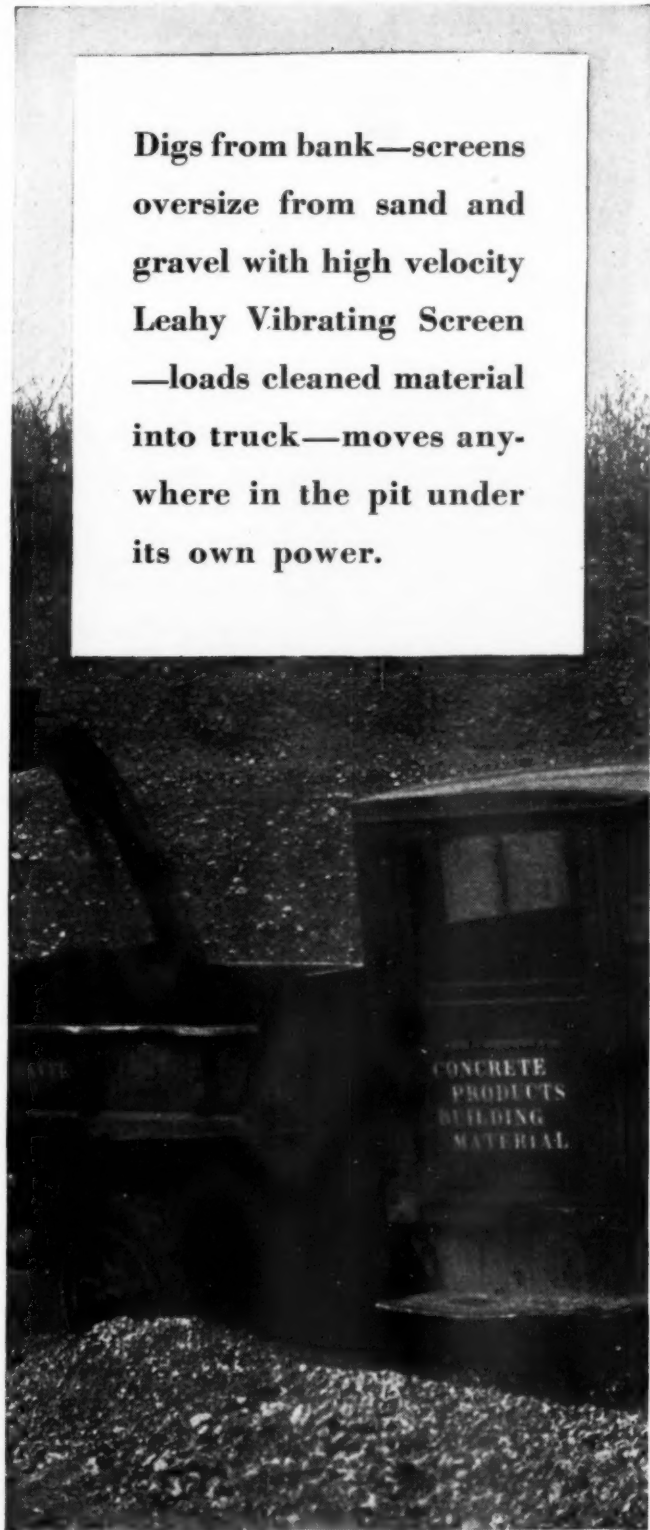
The screened sand is delivered by the conveyor, as shown here—the gravel by the spout at the rear of the machine. By simply flipping a gate the oversize will be discharged onto the sand conveyor for gravel loading—or down the gravel spout, permitting sand loading.

BARBER GR



Sand and Gravel Plant

Digs from bank—screens
oversize from sand and
gravel with high velocity
Leahy Vibrating Screen
—loads cleaned material
into truck—moves any-
where in the pit under
its own power.



E E N E

In this single compact New Barber-Greene Machine you have combined all the functions usually found in a big, elaborately equipped, pit set-up.

This one-man Barber-Greene digs directly from the bank. It carries the material directly to its own high-velocity Leahy Vibrating Screen, operating at about 1600 v.p.m.

This efficient screen removes all oversize, and separates the sand and gravel. And clean material of the proper size is loaded into your waiting trucks or wagons at a ¾-ton-per-minute rate.

One man handles the entire outfit and its every operation. One man moves it to any spot in the pit where it is ready to go to work immediately upon arrival.

Naturally the initial and operating costs of this Newest Barber-Greene average far below those of other equipment performing the same work.

So if you're interested in getting screened gravel and sand—without a big gang—at a speed that keeps trucks moving out of the pit—without elaborate and expensive equipment—at new, low per yard costs, look into this new Barber-Greene.

This coupon brings you the Barber-Greene Leahy-Screen brochure which tells in more detail what the outfit is and can do on the type of work you have in mind.

Send the coupon today—there's no obligation, of course.

BARBER-GREENE COMPANY

560 West Park Avenue, Aurora, Illinois

BARBER-GREENE COMPANY

560 West Park Avenue, Aurora, Illinois

This coupon brings the complete information on the New Barber-Greene One-Man Sand and Gravel Plant, for which we haven't room in this advertisement.

Send it today.

Name

Address

City..... State.....

SAND

Bank Building Concrete Paving

WASHED GRAVEL

In Car, Scow and Barge Lots

THE ARUNDEL CORPORATION

BALTIMORE, MD.

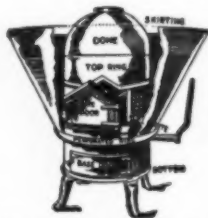
Office, PIER 2, PRATT STREET

Wharves: PIER 2, PRATT ST., and FOOT OF CLINTON ST.

SAND DRYERS

(With or without External Gratings)

A portable machine, daily capacity 5 to 7 tons.



This dryer has a low first cost, is easily and cheaply operated and guaranteed dry sand.

The low cost makes it valuable for companies needing dry sand on two or more jobs at the same time, thereby eliminating the handling cost of one point only.

Write for descriptive pamphlet

The Ripley Foundry & Machine Co.
Ripley, Ohio

For Contractors, Railroads,
Trolley Lines, Coal Companies,
Industrial Plants,
Foundries.

DRYERS

FOR ALL MATERIALS

AMERICAN PROCESS CO. Dodge Bldg., NEW YORK CITY
53 Park Place

SAND-GRAVEL-BRICK FILTER GRAVEL

Washed Sand and Gravel for Concrete
Roads and Buildings

Filter Gravel, all sizes—Building Bricks

FRIEND & CO., INC. River St., Petersburg, Va.

Crushed Stone
Mascot Chatts Roofing Gravel
Asphaltic Roadway Gravel
Asphalt Filler Dust



AMERICAN LIMESTONE COMPANY
KNOXVILLE TENNESSEE



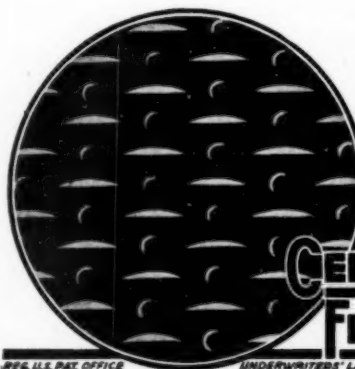
THE PRESIDENT SAYS.....

"One of our foremost policies has always been to make our plant a safe place in which to work."

"One of the big factors in maintaining this policy has been the Central Floor Plate."

"It prevents slipping."

This plate will do the same for you!



Central Iron & Steel Co.
Harrisburg, Pa.

Offices in all principal cities

If interested, send for sample and more detailed information on

**CENTRAL "KNOBBY"
NON-SKID
FLOOR PLATES**

REG. U.S. PAT. OFFICE

UNDERWRITERS' LABORATORIES INSPECTED S.A. 443

FLOOR NEVERSLIP PLATES

"The Plate with Perfect Diamonds"

AMERICAN PRESSED STEEL

Commercial Trust Building—Philadelphia—Penn.



for economy and permanence in Road Building and General Construction

WOODSTOCK SLAG CORP.

Southern Railway Bldg., Birmingham, Ala.

CRUSHED LIMESTONE

Best for All Purposes

We manufacture all sizes of stone suitable for all classes of road building and concrete work where only a high-grade limestone is required.

Quarries opened up in 1912.

Capacity 4000 tons daily.

Quarries:

Blue Ridge, Va. Pembroke, Va. Pounding Mill, Va.

W. W. BOXLEY & COMPANY

Room 711, Boxley Building, - ROANOKE, VA.



EWC TRAILERS are made for every industrial haulage purpose. Special trucks and trailers designed and built for individual requirements.
TRUCKS and WHEELS for mounting portable machinery of all kinds, any size and capacity.
TELL US your hauling problem and let us suggest the equipment for it.

ELECTRIC WHEEL COMPANY
5 Ohio Street QUINCY, ILL.

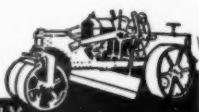
ASPHALT PLANTS

THE SIMPLICITY SYSTEM COMPANY
CHATTANOOGA, TENNESSEE

SEAWALLS WEBER SYSTEM
MANY DIFFERENT TYPES TO MEET EVERY CONDITION.
SAFEST AND MOST PERMANENT CONSTRUCTION.
ENORMOUS SAVING OF COST
FOR COMPLETE INFORMATION WRITE TO:
SHORE-LINE BUILDERS, INC.
JACKSONVILLE, FLORIDA.
WEBER SYSTEM **BULKHEADS**

ACME ROAD MACHINERY **ACME** COMPANY, FRANKFORT, N.Y.

ACME
Pony Road Rollers



ACME ROAD MACHY. CO. FRANKFORT, N.Y.

THE HUBER MANUFACTURING COMPANY
310 EAST CENTER ST., MARION, OHIO. *Send for Catalog*

HUBER
4 CYL. MOTOR ROLLER

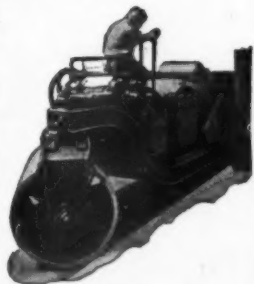
**"No honeycombing—
and a smooth
even pavement"**

Contractors write us that there's no sinking or bridging with an ERIE Roller.

The reason is plain: The ERIE compacts the asphalt uniformly because $\frac{3}{4}$ of the weight of this roller is concentrated over the compression roll.

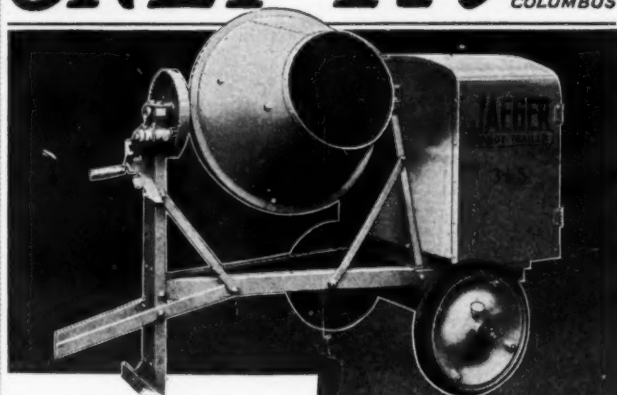
Roll the job with an ERIE and your margin of profit is larger. Write today for Bulletin "M."

ERIE MACHINE SHOPS
Erie, Pa.



ERIE ROLLERS
ONE AND ONLY SAME HIGH QUALITY

ONLY \$179.50
NET F.O.B. COLUMBUS



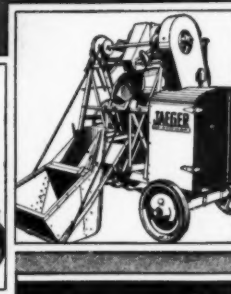
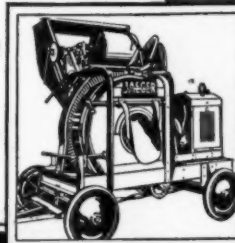
COMPLETE with engine and 100% Jaeger quality throughout. Only Jaeger world leadership makes possible values like this. Write for catalog, prices and terms.

THE JAEGER MACHINE CO.
115 Dublin Ave., Columbus, Ohio

The **HANDY**
Trailer—Full
half bag size

For Biggest
Values—

On Tilters and
Non-Tilt Mixers,
all sizes, let us
send Jaeger's
New Catalog.



Buffalo Springfield

How well those responsible for the design and fabrication of

**BUFFALO - SPRINGFIELD
ROLLERS**

have wrought is evidenced by the fact that there are more Buffalo-Springfields on the roads and streets of America, both on maintenance and new construction, than all other builders of such equipment can account for.

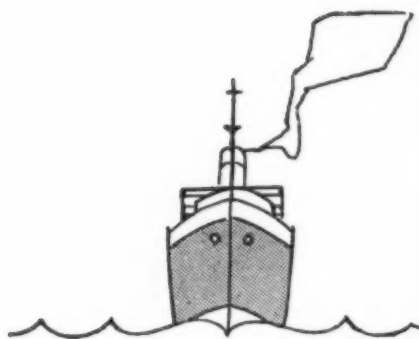
Built in all practical sizes, three wheel and tandem, steam and motor driven. Scarifier and other attachments optional.

Write for illustrated booklet

**THE BUFFALO-SPRINGFIELD
ROLLER CO.**

Springfield, Ohio





EXECUTIVES: Mail this Coupon

**GALVESTON WHARF COMPANY, Room 173
Galveston, Texas.**

Please put me on your weekly mailing list for "*Shippers Digest of Galveston*."

Name _____ Title _____

Company or Business _____

Address _____

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for FREE SUBSCRIPTION TO—



The Port of Galveston is the Port of Quickest Dispatch in America, the port that takes a personal interest in your shipments. It will save you time and money on Exports and Imports.

—SHIPPERS DIGEST OF GALVESTON

EXECUTIVES or other shippers who are not already receiving *Shippers Digest of Galveston*, issued weekly, are invited to mail the coupon for free subscription.

The *Shippers Digest of Galveston* gives weekly Cotton, Grain, Flour and General Cargo news from the Port of Galveston—Sailing Lists to World Ports—Sailing Lists in the Coastwise Service to and from Galveston—valuable information of interest to every shipper.

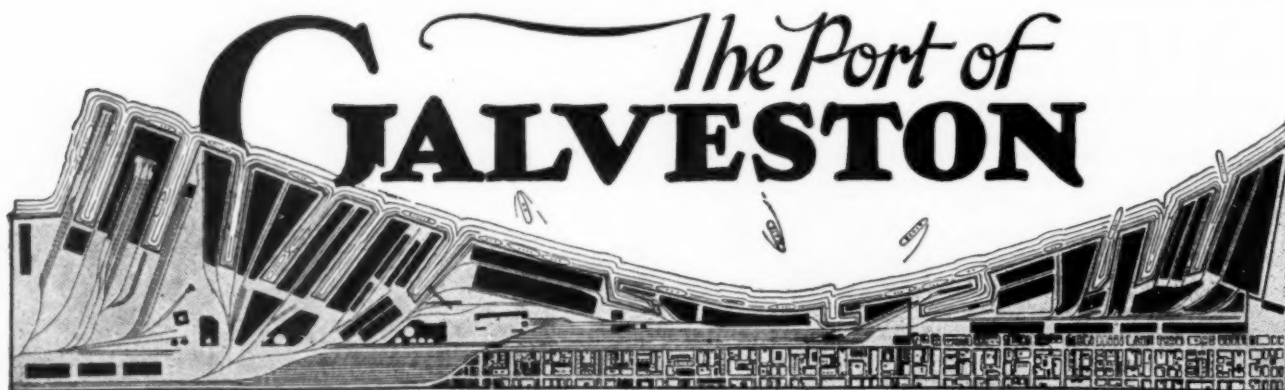
Also get full information on the unmatched unit facilities of the Port of Galveston—The Port of Quickest Dispatch in America. Learn why it will save you time and money to route exports or imports "Via GALVESTON."

Galveston Wharf Company

Established 1854

George Sealy, Pres.

F. W. Parker, Gen. Mgr.



To the MANUFACTURER and DISTRIBUTOR

Abundant supplies of coal, coke, iron, timber and other raw materials lie in the regions of Georgia and Alabama, which are traversed by the

Central of Georgia Railway

Cheap electric power, numerous undeveloped water-powers, good home markets and excellent shipping facilities. Therefore, manufacturing conditions are ideal.

Many of the cities on the Central of Georgia Railway occupy advantageous positions for distributing warehouses, and a number of the larger northern and eastern manufacturers supply their southeastern trade from branch houses in these cities.

Full and detailed information upon application.

J. M. MALLORY, General Industrial Agent

413 West Liberty St.
SAVANNAH, GEORGIA

In St. Louis Hotel Mayfair....

8th and St. Charles

In the center of theatre and shopping districts. Floor lamps, fans, circulating ice water in every room. The quiet, refined atmosphere of an exclusive club—an hotel of distinction. Dining room. Coffee shop. Garage service.

400 ROOMS — \$3⁰⁰ to \$6⁰⁰
BATHS

Hotel Lennox....

9th and Washington

St. Louis' newest and smartest hotel opened September 3rd. In the heart of business district. Dining room. Coffee shop. Garage service.

400 Rooms with tub bath and shower — \$3⁰⁰ to \$6⁰⁰

Hotel Kings-Way...

West Pine at Kingshighway

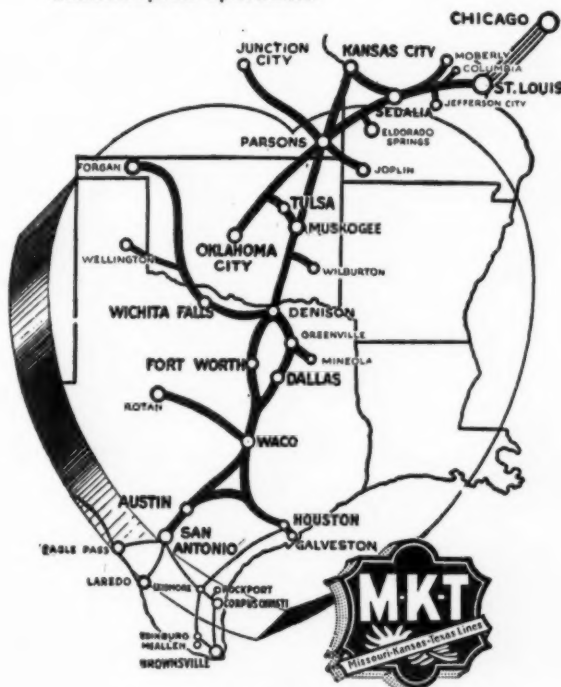
Opposite beautiful Forest Park. Near bus, street car and motor highways. 20 minutes from downtown. Club breakfasts, table d'hôte dinners. Rooms for two from \$4. Special rates for permanent guests.

Heiss Hotel System KMOX

Southwest

★ Land of Opportunity

LOOK at the map and study the territory served by the Missouri-Kansas-Texas Lines. Within the bounds of this territory you can find advantageous factory locations, an assured power supply, abundant raw materials, competent labor, lowered operative costs, and favorable climatic conditions for uninterrupted operation.



Know the Whole Story

Inquire of our Representatives where to locate your factory and make the most money running it! At your command — Our confidential and dependable service ... a location to fit your particular requirements... Write for our "Industrial Opportunities" booklet.

Ask for More Detailed Information

Write Arthur E. Gilman, Manager, Department of Industrial and Agricultural Development, St. Louis, Mo., or T. L. Peeler, Industrial Commissioner, Dallas, Texas.

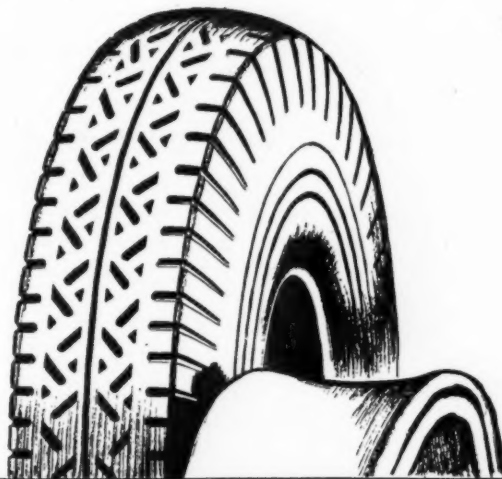
INDUSTRIAL CHEMISTRY

Industrial chemistry has become of primary importance in Alabama's development. Fertilizer plants and cottonseed oil mills have long been scattered over the State. Coke and other by-products of coal have become major products, with almost unlimited promise. The South's largest electro-chemical operation is located at Anniston, as is the semi-commercial experimental plant of the U. S. Bureau of Standards, manufacturing Xylose from cottonseed hulls. Large explosive plants of two national producers are located at Birmingham; the State consumed (in 1927) 105,507 kegs of black powder, 8,316,094 pounds of high explosives other than permissibles, and 4,847,100 pounds of permissible explosives. A total of 123 plants now operate in the State, producing products valued at \$52,797,969, of which the cost of materials is \$38,858,966 and the value added by manufacture, \$13,939,003.

This is an extract from a comprehensive survey of Alabama, made by the Alabama Industrial Development Board. Copies of this survey will be furnished responsible individuals upon request. Address: Alabama Industrial Development Board, Brown-Marx Building, Birmingham, Ala.

This advertisement published through the courtesy of the Alabama Power Company, whose New Industries Division is actively cooperating with the Alabama Industrial Development Board in finding profitable locations for new industries in Alabama.

There are good
reasons why
GEORGIA
is becoming
so important
to the



RUBBER INDUSTRY



THE Rubber industry is coming to Georgia as the result of first-hand experience with operations in this state. Tire-fabric production showed the way at first,—and Georgia now produces half the world supply.

Operating these fabric mills, the industry learned the efficiency of Georgia's Anglo-Saxon workers, the economy of low taxes, plentiful power, cheap fuels, low building costs. So when the South became a rich market, and southern volume warranted

branch plants—they began to move into the territory.

The Rubber industry—like such other industries as Clay and Glass, Paper and Pulp, Furniture, Textiles and Full Fashioned Hosiery—may secure detailed data on available locations in Georgia, without charge or obligation. Special engineering surveys have been made, and are offered interested executives by the **INDUSTRIAL DEPARTMENT**, Georgia Power Company, 20 Pine street, New York, or Electric building, Atlanta, Ga.

GEORGIA

POWER



COMPANY

INDUSTRY PROSPERS IN GEORGIA

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Carborundum Co., Niagara Falls, N. Y.

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Ernst & Ernst, New York, N. Y.
Hollowell Gorham & Co., Greensboro, N. C.
Le Baron, E. T., Jacksonville, Fla.

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De Laval Steam Turbine Co., Trenton, N. J.
General Electric Co., Schenectady, N. Y.
Ingersoll-Rand Co., New York, N. Y.
New Engine Co., Lansing, Mich.
O. K. Clutch & Mch. Co., Columbia, Pa.
Quincy Compressor Co., Quincy, Ill.
Sullivan Machinery Co., Chicago, Ill.
Westinghouse Traction Brake Co., Wheeling, Pa.

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Skinner Bros. Mfg. Co., St. Louis, Mo.
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Shaw Co., Russell B., St. Louis, Mo.

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Aluminum Co. of Amer., Pittsburgh.

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Bull Dog Floor Clip Co., Winterset, Iowa.

ANGLE IRON-WORKING MACHINERY.

Whitney Metal Tool Co., Rockford, Ill.

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Chase, Wm., J. J., Atlanta.
Lindley, Claude H., Jackson, Miss.
Main, Inc., Chas. T., Boston, Mass.
Milburn, Heister & Co., Wash., D. C.
Meyer Co., Tilghman, Allentown, Pa.
Simmons, Inc. & Associates, B. Stanley, Washington, D. C.

Prescher & Co., Inc., G. Lloyd, Atlanta.
Spirne & Co., J. E., Greenville, S. C.
Wheeler, Walter H., Minneapolis, Minn.
Widner Engineering Co., St. Louis, Mo.

—(Golf Course, Landscape.)

Draper, E. S., Charlotte, N. C.
Kirby & Co., Raleigh, N. C.
Miller & Assn., Wendell F., Columbus, O.
Spoon & Lewis, Greensboro, N. C.

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ARCHITECTURAL BRONZE.

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—Iron Work.

Dietrich Brothers, Baltimore, Md.
Virginia Bridge & Iron Co., Roanoke, Va.

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Allen-Sherman-Hoff Co., Phila., Pa.

—Sluicing Systems.

Allen-Sherman-Hoff Co., Phila., Pa.

—Storage Tanks (Cast Iron.)

Allen-Sherman-Hoff Co., Phila., Pa.

ASPHALT.

Gulf Refining Co., Pittsburgh, Pa.

—Filler.

American Limestone Co., Knoxville, Tenn.
Servicised Premoulded Products, Inc., Chicago, Ill.

—Paving.

Barber Asphalt Co., Philadelphia, Pa.

—(Rock.)

Kentucky Rock Asphalt Co., Louisville, Ky.

AUDITORS.

Black & Co., Baltimore, Md.
Ernst & Ernst, New York, N. Y.
Hollowell Gorham & Co., Greensboro, N. C.
Le Baron, Ernest T., Jacksonville, Fla.

BABBITT METAL.

Ryerson & Sons, Inc., Jos. T., St. Louis and New York.

BACKFILLERS.

Austin Machinery Corp., Muskegon, Mich.
Buckeye Traction Ditcher Co., Findlay, O.
Harnischfeger Corp., Milwaukee, Wis.
National Equipment Corp. (Insley, Parsons), Milwaukee, Wis.

BALLAST (Railroad.)

American Limestone Co., Knoxville, Tenn.

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Prudential Savings Bank & Trust Co., Cincinnati, Ohio.
Taylor, Wilson & Co., Inc., Cincinnati, Ohio.

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Bank of Alabama, The, Ensley, Ala.
Bank of New York & Trust Co., N. Y.
Equitable Trust Co., New York, N. Y.
First and Merchants National Bank, Richmond, Va.
Maryland Trust Co., Baltimore, Md.
Mercantile Trust Co., Baltimore, Md.

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American Bridge Co., New York, N. Y.
McClintic-Marshall Co., Pittsburgh, Pa.

BARB (Steel, Rounds, Flats.

Hexagon and Squares.)
Carnegie Steel Co., Pittsburgh, Pa.
Connors Steel Co., Birmingham, Ala.
Gulf States Steel Co., Birmingham, Ala.
Knoxville Iron Co., Knoxville, Tenn.
Republic Steel Corp., Youngstown, Ohio.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
Sweet's Steel Corp., Williamsport, Pa.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Timken Roller Bearing Co., Canton, Ohio.
Virginia Bridge & Iron Co., Roanoke, Va.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

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Electric Storage Battery Co., Phila., Pa.

BEAMS, CHANNELS, ANGLES.

Belmont Iron Works, Philadelphia, Pa.
Carnegie Steel Co., Pittsburgh, Pa.
Chattanooga Roller & Tank Co., Chattanooga, Tenn.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.

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Hyatt Roller Bearing Co., Newark, N. J.
Timken Roller Bearing Co., Canton, Ohio.

—(Line Shaft.)

Wood's Sons Co., T. B., Chambersburg, Pa.

—(Roller.)

Hyatt Roller Bearing Co., Newark, N. J.
Timken Roller Bearing Co., Canton, Ohio.

BELT (Chain.)

Diamond Chain & Mfg. Co., Indianapolis.
Morris Chain Co., Itasca, N. Y.

—(Leather, Canvas, Rubber.)

Baltimore Belting Co., Baltimore, Md.
Charlotte Leath Belting Co., Charlotte, N. C.
Republic Rubber Co., Youngstown, Ohio.

—Dressing.

Dixon Crucible Co., Jos., Jersey City, N. J.

—Conveyors.

Barber-Greene Co., Aurora, Ill.

BENCH LEGS.

Angle Steel Stool Co., Plainwell, Mich.

—Drawers (Steel.)

Angle Steel Stool Co., Plainwell, Mich.

BENCHES and TABLES.

(Steel.)
Angle Steel Stool Co., Plainwell, Mich.

BILLETS (Basic Open Hearth.)

Gulf States Steel Co., Birmingham, Ala.
Republic Steel Corp., Youngstown, Ohio.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

BINS (Drill and Reamer.)

Angle Steel Stool Co., Plainwell, Mich.

—(Steel Loading.)

Blaw-Knox Co., Pittsburgh, Pa.

BLASTING POWDER and Accessories.

Du Pont de Nemours & Co., E. I., Wilmington, Del.
Hercules Powder Co., Inc., Wilmington, Del.

BLINDS (Venetian and Awning.)

Wilson Corp., The, J. G., New York.

BLOCKS (Chain.)

Harrington Co., The, Philadelphia, Pa.

—TACKLE for Wire and Manila Rope.

Patterson Co., W. W., Pittsburgh.

BLOWERS and Exhaust Fans.

National Blow Pipe & Mfg. Co., Ltd., New Orleans, La.

BLOW PIPE SYSTEMS.

National Blow Pipe & Mfg. Co., Ltd., New Orleans, La.
Skinner Bros. Mfg. Co., St. Louis, Mo.

BOILERS (New.)

Babcock & Wilcox Co., The, New York.
Charleston Dry Dock & Machine Co., Charleston, S. C.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Cole Mfg. Co., R. D., Newman, Ga.
Combustion Engr. Corp., New York, N. Y.
Hedges Walsh Weldner Co., Chattanooga, Tenn.
Lombard Iron Works & Supply Co., Augusta, Ga.
Schofield's Sons Co., J. S., Macon, Ga.
Titusville Iron Works Co., Titusville, Pa.
Vogt Mch. Co., Henry, Louisville, Ky.

—(Used.)

Delta Equipment Co., Philadelphia, Pa.
Randle Machinery Co., The, Cincinnati, O.
Zelicker Supply Co., W. A., St. Louis and New York.

BOILER SETTINGS.

Harbison-Walker Refractories Co., Pittsburg.

—Tubes.

Boiler Tube Co. of America, Pittsburgh.
National Tube Co., Pittsburgh, Pa.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.

—Tubes (Charcoal, Iron.)

Reading Iron Co., Reading, Pa.

BOLTS, Rivets, Studs, Washers.

Bethlehem Steel Co., Bethlehem, Pa.
Progressive Mfg. Co., Torrington, Conn.
Republic Steel Corp., Youngstown, Ohio.
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
Virginia Bridge & Iron Co., Roanoke, Va.

—(Track.)

Sweet's Steel Co., Williamsport, Pa.

BOND BUYERS.

Garraway & Co., S. G., Chicago.
Hanchett Bond Co., Inc., The, Chicago.
Law & Co., A. M., Spartanburg, S. C.
Marx & Co., Birmingham, Ala.

Mercantile Trust Co., Baltimore, Md.
Nuveen & Co., John, Chicago, Ill.
Provident Savings Bank and Trust Co., Cincinnati, Ohio.
Robinson-Humphrey Co., Atlanta, Ga.
Seasongood & Mayer, Cincinnati, Ohio.
Taylor, Wilson & Co., Inc., Cincinnati, Ohio.

BORING (Core.)

Mott Core Drilling Co., Huntington, W. Va.
Pennsylvania Drilling Co., Pittsburgh, Pa.
Southern Drilling Co., Baltimore, Va.
Sprague & Henwood, Inc., Scranton, Pa.

BOXES (Paper.)

Old Dominion Box Co., Lynchburg, Va.

BRASS GOODS.

Chase Brass & Copper Co., Waterbury, Conn.
Copper and Brass Research Assn., New York.
Mueller Co., Decatur, Ill.

BRICK (Common Building.)

Friend & Co., Inc., Petersburg, Va.

—(Face.)

Alabama Clay Prod. Co., Birmingham.

—(Fire.)

Alabama Clay Prod. Co., Birmingham.
Cambria Clay Products Co., Blackfork, O.
Dee Co., Wm. E., Oak Hill, Ohio.
Taylor Sons Co., Charles, Cincinnati.

—(Vitrified, Paving.)

Natl. Paving Brick Mfrs. Assn., Washington, D. C.

—and Clayworking Machy.

Steel & Sons, J. C., Statesville, N. C.

BRIDGE (Asphalt Planking.)

Servicised Premoulded Products, Inc., Chicago, Ill.

—Operating Machinery

Earle Gear & Machine Co., Phila., Pa.

—Timber.

Amer. Crosscutting Co., Louisville, Ky.
Industrial Lumber Co., Elizabeth, La.

BRIDGES (Concrete.)

Atlantic Bridge Co., Greensboro, N. C.

—(Crescoted Wood.)

Atlantic Bridge Co., Greensboro, N. C.

—(Steel.)

American Bridge Co., New York, N. Y.
Atlantic Bridge Co., Greensboro, N. C.
Belmont Iron Works, Philadelphia, Pa.
Champion Bridge Co., Wilmington, O.
Converse Bridge & Steel Co., Chattanooga, Tenn.
Ingalls Iron Works Co., Birmingham, Ala.
McClintic-Marshall Co., Pittsburgh, Pa.
Nashville Bridge Co., Nashville, Tenn.
Richmond Struct. Steel Co., Richmond, Va.
Virginia Bridge & Iron Co., Roanoke, Va.

BRONZE (Architectural.)

Heath Company, J. S., Waukegan, Ill.

—(Machine.)

Moccasin Brushing Co., Chattanooga, Tenn.

BUBBLERS.

Rundie-Scence Mfg. Co., Milwaukee, Wis.
Taylor Co., Halsey W., Warren, Ohio.

BUCKETS (Clam Shell.)

Blaw-Knox Co., Pittsburgh, Pa.
Hayward Co., The, New York, N. Y.
Industrial Brownholst Corp., Cleveland, O.
Owen Bucket Co., The, Cleveland, Ohio.

—(Dredging, Excavating, Sewer, etc.)

Hayward Co., The, New York, N. Y.
Monghan Mfg. Corp., Chicago, Ill.
Owen Bucket Co., The, Cleveland, Ohio.
Stuebner Iron Works, G. L., Long Island City, N. Y.

—(Elevator.)

Hendrick Mfg. Co., Carbondale, Pa.
Webster & Weller Mfg. Companies, Chicago, Ill.

—(Orange Peel.)

Hayward Co., The, New York, N. Y.

—(Ore Handling.)

Hayward Co., The, New York, N. Y.
Owen Bucket Co., The, Cleveland, Ohio.
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 NEW ORLEANS, 344 Camp Street
 PHILADELPHIA, Packard Building
 PHOENIX, ARIZ., Heard Building
 PITTSBURGH, Koppers Building

PORTLAND, ORE., Failing Building
 SALT LAKE CITY, Kearns Building
 SAN FRANCISCO, Sheldon Building
 SEATTLE, Smith Tower
 HONOLULU, T. H., Castle & Cooke
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 HAVANA, CUBA, Calle de Aguiar 104
 SAN JUAN, PORTO RICO, Recinto Sur 51

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Moyer Co., Tilghman, Allentown, Pa.
Stone & Webster, Inc., Boston, Mass.
Thompson & Bros., T. C., Charlotte, N. C.
White Engineering Corp., J. G., New York.

BUILDINGS (Industrial.)
Belmont Iron Works, Philadelphia, Pa.
Blaw-Knox Co., Pittsburgh, Pa.
Braden Steel Corp., Tulsa, Okla.
Butler Mfg. Co., Kansas City, Mo.
Maryland Metal Building Co., Balto., Md.
McClintic-Marshall Co., Pittsburgh, Pa.
Nashville Bridge Co., Nashville, Tenn.
Truscon Steel Co., Youngstown, Ohio.
Virginia Bridge & Iron Co., Roanoke, Va.

(Portable Sheet Metal.)
Braden Steel Corp., Tulsa, Okla.
Butler Mfg. Co., Kansas City, Mo.
Maryland Metal Building Co., Balto., Md.

BULKHEADS.
Shore-Line Builders, Inc., Jacksonville, Fla.
Snare Corp., Frederick, New York, N. Y.

BULLDOZERS.
Beatty Machine & Mfg. Co., Hammond Ind.
Trackson Co., Milwaukee, Wis.

BUSHINGS (Brass and Bronze.)
Moccasin Bushing Co., Chattanooga, Tenn.

BUSINESS METHODS.
Ernst & Ernst, New York, N. Y.

CABINETS (Steel.)
Angle Steel Stool Co., Plainwell, Mich.

CABLES (Stud Link.)
Woodhouse Chain Works, Trenton, N. J.
—and Wire (Electric.)
American Steel & Wire Co., Balto., Md.
Okenite Co., New York, N. Y.
Roebbling's Sons Co., John A., Trenton, N. J.
Western Electric Co., New York City.

CABLEWAYS (Overhead Suspension.)
Broderick & Bascom Rope Co., St. Louis.
Sauerman Bros., Chicago, Ill.

CALCIUM CHLORIDE.
Grasselli Chemical Co., Inc., Birmingham, Ala.

CAN and Box-Making Machinery (Tin.)
Bliss Co., E. W., Brooklyn, N. Y.

CAR Loaders and Unloaders.
Barber-Greene Co., Aurora, Ill.
Stephens-Adams Mfg. Co., Birmingham, Ala.
—Fullers.
Webster & Weller Mfg. Companies, Chicago, Ill.

CARS (Dump, Industrial, Logging and Mine.)
Atlas Car & Mfg. Co., The, Cleveland, O.
Eastern Car & Construction Co., Easton, Pa.
Koppel Ind. Car & Equip. Co., Koppel, Pa.
Southern Iron & Equipment Co., Atlanta.
—Steps (Safety.)
Irving Iron Works Co., Long Island City, N. Y.

CASTERS (Truck.)
Service Caster & Truck Co., Albion, Mich.

CASTINGS (Brass, Bronze and Aluminum.)
Inter-State Fdry. & Mach. Wks., Johnson City, Tenn.
Moccasin Bushing Co., Chattanooga, Tenn.

(Chilled Iron.)
Fuller Lehigh Co., Fullerton, Penna.

(Gray Iron.)
Columbian Iron Works, Chattanooga, Tenn.
Fuller Lehigh Co., Fullerton, Penna.
Glamorgan Pipe & Fdry. Co., Lynchburg, Va.
Hammond Iron Co., Birmingham, Ala.
Inter-State Fdry. & Mach. Wks., Johnson City, Tenn.
National Cast Iron Pipe Co., Birmingham, Ala.
Roanoke Iron & Bridge Works, Inc., Roanoke, Va.
Salem Fdry. & Mach. Wks., Salem, Va.
U. S. Pipe & Foundry Co., Burlington, N. J.

(Malleable Iron and Steel.)
Timken Roller Bearing Co., Canton, O.

(Semi-Steel.)
Salem Fdry. & Machine Works, Salem, Va.

(Steel.)
Bethlehem Steel Co., Bethlehem, Pa.
Crucible Steel Casting Co., Lansdowne, Delaware Co., Pa.
Deemer Steel Casting Co., New Castle, Del.
Lunkenheimer Co., Cincinnati, Ohio.

CAUSTICIZERS.
Swenson Evaporator Co., Harvey, Ill.

CEMENT (High Temperature.)
Harbison Walker Refractories Co., Pittsburg.

(Portland.)
Alpha Portland Cement Corp., Birmingham, Ala.
Lehigh Portland Cement Co., New York.
Louisville Cement Co., Louisville, Ky.
Portland Cement Assn., Chicago, Ill.

—Guns.
Cement-Gun Co., Inc., Allentown, Pa.

—Machinery.
Allis-Chalmers Mfg. Co., Milwaukee, Wis.

CHAIN BLOCKS (See Blocks, Chain.)

CHAINS (Dredge, Quarry, Steam-Shovel.)
Knoxville Iron Co., Knoxville, Tenn.
Woodhouse Chain Works, Trenton, N. J.

(High Speed Roller.)
Diamond Chain & Mfg. Co., Indianapolis.

(Silent Drive.)
Diamond Chain & Mfg. Co., Indianapolis.
Morse Chain Co., Ithaca, N. Y.

(Sprocket.)
Chain Belt Co., Milwaukee, Wis.
Diamond Chain & Mfg. Co., Indianapolis.
Morse Chain Co., Ithaca, N. Y.

(Welded.)
Woodhouse Chain Works, Trenton, N. J.

CHAIRS (Opera and Theatre.)
Andrews Co., A. H., Chicago, Ill.

—and Stools (Steel.)
Angle Steel Stool Co., Plainwell, Mich.

CHEMICALS.
Grasselli Chemical Co., Inc., Birmingham, Ala.

CHEMICAL MACHINERY
Swenson Evaporator Co., Harvey, Ill.

CHEMICAL TOILETS.
Kaustine Co., Inc., Perry, N. Y.

CHEMISTS, CHEMICAL ENGINEERS (Analytical.)
Barrow-Agee Laboratories, Memphis, Tenn.
Flood & Co., Walter H., Chicago, Ill.
Froehling & Robertson, Inc., Richmond, Va.
Hunt Co., Robert W., Chicago, Ill.
Meigs, Bassett & Slaughter, Phila., Pa.
Picard Laboratories, The, Birmingham, Ala.
Pittsburgh Testing Laboratories, Pittsburgh, Pa.
Southwestern Laboratories, Fort Worth, Texas.
Stillman & Van Sien, New York.
Wiley & Co., Inc., Baltimore, Md.
(Consulting, Paper Industry.)
Froehling & Robertson, Inc., Richmond, Va.

CHIMNEYS (Concrete.)
Rust Engineering Co., Birmingham, Ala.

(Radial Brick.)
Rust Engineering Co., Birmingham, Ala.

CHLORIDE ACCUMULATOR.
Electric Storage Battery Co., Phila., Pa.

CHLORINATORS.
Rees, S. P., Atlanta.

CIRCUIT BREAKERS.
L. T. E. Circuit Breaker Co., Phila., Pa.
Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

CITY AND TOWN PLANNING.
Draper, E. S., Charlotte, N. C.
Ludlow Engineers, Winston-Salem, N. C.

CLOCKS (For all purposes.)
Kaiser Clock Co., L. E., Baltimore, Md.

(Watchman's Portable.)
Davis-Paradis Watchman's Clock Corp., New York, N. Y.
Kaiser Clock Co., L. E., Baltimore, Md.

CLUTCHES (Friction.)
Caldwell Co., Inc., W. E., Louisville, Ky.
Schultz & Son, A. L., Chicago, Ill.
Wood's Sons Co., T. B., Chambersburg, Pa.

COAL (Bituminous.)
Hammond Iron Co., Birmingham, Ala.
Hoss-Sheffield Steel & Iron Co., Birmingham, Ala.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

—and Ash-Handling Mch.
Allen-Sherman-Hoff Co., Phila., Pa.
Chain Belt Co., Milwaukee, Wis.
Hayward Co., The, New York, N. Y.
Industrial Brownhoist Corp., Cleveland, O.
Northwest Engineering Co., Chicago.
Stephens-Adams Mfg. Co., Birmingham, Ala.
Webster & Weller Mfg. Companies, Chicago, Ill.

—Bunkers (Cast Iron.)
Allen-Sherman-Hoff Co., Phila., Pa.

—Tipples.
American Bridge Co., New York, N. Y.
Virginia Bridge & Iron Co., Roanoke, Va.

COCKS (Service.)
Merco Nordstrom Valve Co., San Francisco, Calif.

COKE.
Hammond Iron Co., Birmingham, Ala.
Hoss-Sheffield Steel & Iron Co., Birmingham, Ala.
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

COLUMNS (Cast Iron.)
U. S. Pipe & Foundry Co., Burlington, N. J.

COMPRESSORS (Gasoline Extraction.)
Sullivan Machinery Co., Chicago, Ill.

CONCRETE (Block Machinery.)
Blystone Mfg. Co., Cambridge Springs, Pa.

—Block Pallets.
Commercial Shearing & Stamping Co., Youngstown, Ohio.

—Construction (Reinforced.)
Cement-Gun Co., Inc., Allentown, Pa.
Cement Gun Construction Co., Chicago.
Rust Engineering Co., Birmingham, Ala.

—Floor Slabs.
American Cement Tile Mfg. Co., Pittsburgh, Pa.

—Information Only.
Portland Cement Assn., Chicago, Ill.

—Mixers.
Blystone Mfg. Co., Cambridge Springs, Pa.
Chain Belt Co., Milwaukee, Wis.
Dunning & Boschert Press Co., Inc., Syracuse, N. Y.
Jaeger Machine Co., Columbus, Ohio.
Lansing Co., Lansing, Mich.

—Pipe Machinery (See Pipe Machinery, Concrete.)

—Placing Equipment.
National Equipment Corp. (Insley Division), Milwaukee, Wis.

—Road Curing.
McEverlast, Inc., Los Angeles, Cal.

—Roofing Tile.
American Cement Tile Mfg. Co., Pittsburgh, Pa.

CONDENSERS.
Chicago Pneumatic Tool Co., New York.
Ingersoll-Rand Co., New York, N. Y.
Manistee Iron Works Co., Manistee, Mich.
Swenson Evaporator Co., Harvey, Ill.
Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

CONDUITS (Electric, Interior, Steel.)
Western Electric Co., New York City.
Youngstown Sheet & Tube Co., Youngstown, Ohio.

CONTRACTORS (Airports.)
Miller & Asso., Wendell P., Chicago.

(Bridge.)
Kansas City Bridge Co., Kansas City, Mo.
Snare Corp., Frederick, New York.

(Drainage and Dredging.)
Arundel Corp., The, Baltimore, Md.
Atlantic Gulf and Pacific Co., New York.

(Electrical.)
Industrial Electrical Co., Savannah, Ga.
Walker Electrical Co., Atlanta, Ga.
Webb Electric Co., Anderson, S. C.

(Foundations and Dams.)
Calligan & Co., A. H., Richmond, Va.
Snare Corp., Frederick, New York, N. Y.

(General.)
Angie-Blackford Co., Greensboro, N. C.
Blair, Algernon, Montgomery, Ala.
Charleston Constructors, Inc., Charleston, S. C.

Cornell-Young Co., Inc., Macon, Ga.
Fiske-Carter Constr. Co., Greenville, S. C.
Gridley Constr. Co., Lee A., Knoxville, Tenn.
Saville, Inc., Allen J., Richmond, Va.
Seaboard & Southern Constr. Co., Inc., Jacksonville, Fla.
Snare Corp., Frederick, New York, N. Y.
Stone & Webster, Inc., Boston, Mass.
Thompson & Bros., T. C., Charlotte, N. C.
Tucker & Laxton, Charlotte, N. C.
White Engineering Corp., J. G., New York.

(Industrial Buildings.)
Angie-Blackford Co., Greensboro, N. C.
Barstow & Co., W. S., Reading, Pa.
Blair, Algernon, Montgomery, Ala.
Fiske-Carter Constr. Co., Greenville, S. C.
Seaboard & Southern Constr. Co., Inc., Jacksonville, Fla.
Snare Corp., Frederick, New York, N. Y.
Stone & Webster, Inc., Boston, Mass.
Thompson & Bros., T. C., Charlotte, N. C.
Tucker & Laxton, Charlotte, N. C.
White Engineering Corp., J. G., New York.

—Mill Village.
Hornbuckle Contracting Co., Atlanta, Ga.

(Plastering.)
Gomez & Co., P. L., Atlanta, Ga.
Jennings & Co., Floyd, Atlanta, Ga.

(Power Plants.)
Snare Corp., Frederick, New York, N. Y.

(Railroad.)
Calligan & Co., A. H., Richmond, Va.
Cornell-Young Co., Inc., Macon, Ga.

(Reinforced Concrete.)
Blair, Algernon, Montgomery, Ala.
Cement Gun Construction Co., Chicago.
Gunite Cone. & Constr. Co., Kansas City.
Seaboard & Southern Constr. Co., Inc., Jacksonville, Fla.
Tucker & Laxton, Charlotte, N. C.

(Road and Street Paving.)
Fiske-Carter Constr. Co., Greenville, S. C.
Gridley Constr. Co., Lee A., Knoxville, Tenn.

(Sewerage and Waterworks.)
Gridley Constr. Co., Lee A., Knoxville, Tenn.

(Swimming Pool.)
Rees, S. P., Atlanta, Ga.

(Water-Works.)
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

—Machinery and Supplies.
(New.)
Bay City Shovels, Inc., Bay City, Mich.
Weller & Co., Birmingham, Ala.
W-K-M Co., Inc., Houston, Texas.

—Machinery and Supplies.
(Used.)
Christian & Co., J. R., Houston, Tex.
Cohen, Chas. F., Lima, O.
Dempster Equip. Co., Knoxville, Tenn.
Equip. Sales & Rentals Co., Pittsburgh.
Grey Steel Products Co., New York.
Guion, Harry P., New York, N. Y.
Johnson & Hoehler, Farmwood, Pa.
Marine Metal & Supply Co., New York.
Penn Machinery Co., H. O. New York.

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McLanahan-Stone Machine Co., Hollidaysburg, Pa.
Stephens-Adams Mfg. Co., Birmingham, Ala.
Universal Crusher Co., Cedar Rapids, Iowa.
Webster & Weller Mfg. Companies, Chicago, Ill.

COPING MACHINES.
Beatty Machine & Mfg. Co., Hammond, Ind.

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COUPLINGS.

Goldens' Fdy. & Mach. Co., Columbus, Ga.

—(Shaft.)

Wood's Sons Co., T. B., Chambersburg, Pa.

CRANES.

Austin Machinery Corp., Muskegon, Mich.
 Buckeye Traction Ditcher Co., Findlay, O.
 National Equipment Co. (Inley, Koehring, Parsons), Milwaukee, Wis.
 Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 The Shovel Co., The, Lorain, Ohio.

—(Crawler.)

Buckeye Traction Ditcher Co., Findlay, O.
 Harnischfeger Corp., Milwaukee, Wis.
 Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 The Shovel Co., The, Lorain, Ohio.

—(Crawling Tractor.)

Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 The Shovel Co., The, Lorain, Ohio.

—(Electric Traveling.)

Harnischfeger Corp., Milwaukee, Wis.
 Milwaukee Elec. Crane & Hoist Corp., Milwaukee, Wis.

—(Full Circle Steam and Electric.)

Austin Machinery Corp., Muskegon, Mich.
 Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 The Shovel Co., The, Lorain, Ohio.

—(Gasoline.)

Buckeye Traction Ditcher Co., Findlay, O.
 Harnischfeger Corp., Milwaukee, Wis.
 Industrial Brownhoist Corp., Cleveland, O.
 Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 The Shovel Co., The, Lorain, Ohio.

—(Locomotive.)

Bucyrus-Erie Co., Erie, Penna.
 Industrial Brownhoist Corp., Cleveland, O.
 Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 The Shovel Co., The, Lorain, Ohio.

—(Material Handling.)

Bay City Shovels, Inc., Bay City, Mich.
 Industrial Brownhoist Corp., Cleveland, O.
 Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 The Shovel Co., The, Lorain, Ohio.
 Universal Crane Co., Lorain, Ohio.

—(Portable Floor.)

Beatty Machine & Mfg. Co., Hammond, Ind.

—(Traveling, Hand Power.)

Harrington Co., The, Philadelphia, Pa.

CRAWLERS (Tractor.)

Biddell Co., W. A., Bucyrus, Ohio.
 Truscen Co., Milwaukee, Wis.

CREOSOTED MATERIALS.

Amer. Creosote Wks., Inc., New Orleans.
 Delaware Wood Preserving Co., Phila.
 Savannah Creosoting Co., Savannah, Ga.

CREOSOTED TIMBER.

Ayer & Lord Tie Co., Chicago, Ill.
 Brown Wood Preserving Co., Louisville, Ky.

CREOSOTE OIL.

Amer. Creosote Wks., Inc., New Orleans.
 Ayer & Lord Tie Co., Inc., Chicago.

CREOSOTING (Wood Materials.)

Amer. Creosote Wks., Inc., New Orleans.
 Amer. Creosoting Co., Inc., Louisville, Ky.
 Brown Wood Preserving Co., Louisville, Ky.
 Delaware Wood Preserving Co., Phila.
 Eppinger & Russell Co., Inc., Chicago.
 Gulf States Cross Co., Hattiesburg, Miss.
 Pettibone & Sons, J. F., Charleston, S. C.
 Savannah Creosoting Co., Savannah, Ga.
 Taylor-Colquitt Co., Spartanburg, S. C.
 Wales Wood-Preserving Co., Norfolk, Va.

CROSS-ARMS (Creosoted.)

Amer. Creosote Wks., Inc., New Orleans.
 Amer. Creosoting Co., Inc., Louisville, Ky.
 Savannah Creosoting Co., Savannah, Ga.

—(Zinc Meta Arsenite Treated.)

Curtin-Howe Corp., New York, N. Y.

CROSS-TIES (Creosoted.)

Amer. Creosote Wks., Inc., New Orleans.
 Amer. Creosoting Co., Inc., Louisville, Ky.
 Ayer & Lord Tie Co., Inc., Chicago.
 Eppinger & Russell Co., New York, N. Y.
 Pettibone & Sons, J. F., Charleston, S. C.
 Savannah Creosoting Co., Inc., Savannah, Ga.
 Taylor-Colquitt Co., Spartanburg, S. C.

—(Zinc Meta Arsenite Treated.)

Curtin-Howe Corp., New York, N. Y.

CRUSHED STONE (Road Concrete and Ballast.)

American Limestone Co., Knoxville, Tenn.
 Boxley & Co., W. W., Roanoke, Va.

CRUSHERS (Coal and Coke.)

Fuller Lehigh Co., Fullerton, Pa.

—Rock.

Universal Crusher Co., Cedar Rapids, Iowa.

CRUSHING and Pulverizing Machinery.

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
 Day Pulverizer Co., Knoxville, Tenn.
 Fuller Lehigh Co., Fullerton, Pa.
 McLanahan-Stone Machine Co., Hollidaysburg, Pa.
 Raymond Bros. Impact Pulverizer Co., Chicago, Ill.
 Universal Crusher Co., Cedar Rapids, Iowa.
 W-K-M Co., Inc., Houston, Texas.

CULVERT PIPE (Cast Iron.)

Amer. Cast Iron Pipe Co., Birmingham.
 Cast Iron Pipe Research Assn., Chicago.
 U. S. Pipe & Foundry Co., Burlington, N. J.

—(Corrugated Metal.)

American Sheet & Tin Plate Co., Pittsburgh, Pa.
 Armo-Culvert Mfrs. Assn., Middletown, O.
 Dixie Culvert & Metal Co., Atlanta, Ga.
 Dixie Culvert Mfg. Co., Little Rock, Ark.
 Louisiana Corr. Culvert Co., Baton Rouge, La.
 Tenn. Metal Culvert Co., Nashville, Tenn.
 Western Metal Mfg. Co., Houston, Texas.

CURB PROTECTORS (Steel Bars.)

Truscen Steel Co., Youngstown, O.

CUTTERS (Wire Rope.)

Leschen & Sons Rope Co., A., St. Louis.

CYLINDERS (Compressed Air, Gas.)

Janney, Jr., Jos. A., Phila., Pa.
 National Tube Co., Pittsburgh, Pa.

DERRICKS and Derrick Fittings.

Clyde Iron Works Sales Co., Duluth, Minn.
 Sagen Derrick Co., Chicago, Ill.

DESKS (School.)

Andrews Co., A. H., Chicago, Ill.

—(Steel Factory.)

Angie Steel Steel Co., Plainwell, Mich.

DIFFUSERS.

Swenson Evaporator Co., Harvey, Ill.

DIGESTERS. (Welded.)

Swenson Evaporator Co., Harvey, Ill.

DITCHING MACHINERY.

Barber-Greene Co., Aurora, Ill.
 Bay City Shovels, Inc., Bay City, Mich.
 Buckeye Traction Ditcher Co., Findlay, O.
 Harnischfeger Corp., Milwaukee, Wis.
 Hayward Co., The, New York, N. Y.
 Industrial Brownhoist Corp., Cleveland.
 Northwest Engineering Co., Chicago, Ill.
 Ohio Power Shovel Co., Lima, Ohio.
 Owen Bucket Co., The, Cleveland, O.

DOORS (Fire.)

Merchant & Evans Co., Philadelphia, Pa.
 Richards-Wilcox Mfg. Co., Aurora, Ill.

—(Fireproof, Air Chamber.)

Wilson Corp., The J. G., New York.

—(Freight Elevator.)

Peelle Co., The, Brooklyn, N. Y.

—(Kalamain.)

Moeschl-Edwards Corr. Co., Cincinnati.

—(Rolling, Steel and Wood.)

Kinnear Mfg. Co., The, Columbus, Ohio.

Mahen Co., R. C., Detroit, Mich.

Moeschl-Edwards Corr. Co., Cincinnati.

Peelle Co., The, Brooklyn, N. Y.

Wilson Corp., The J. G., New York.

—(Steel.)

Detroit Steel Products Co., Detroit, Mich.

Truscen Steel Co., Youngstown, O.

—(Tubular Steel.)

Bayley Co., Wm., Springfield, O.

DRAFTSMEN'S SUPPLIES.

Weber Co., Inc., F., Philadelphia, Pa.

DRAGLINE EXCAVATORS.

Austin Machinery Corp., Muskegon, Mich.
 Bucyrus-Erie Co., Erie, Penna.
 Harnischfeger Corp., Milwaukee, Wis.
 Monaghan Mfg. Corp., Chicago, Ill.
 National Equipment Corp. (Koehring, Inley), Milwaukee, Wis.
 Northwest Engineering Co., Chicago, Ill.

Ohio Power Shovel Co., Lima, Ohio.
 Sauerman Bros., Chicago, Ill.
 The Shovel Co., The, Lorain, Ohio.
 Universal Power Shovel Co., Milwaukee, Wis.

DREDGES (Dipper, Elevator, Hydraulic.)

Bay City Shovels, Inc., Bay City, Mich.
 Bucyrus-Erie Co., Erie, Pa.
 Elliott Machine Corp., Baltimore, Md.
 Morris Machine Wks., Baldwinville, N. Y.

DREDGING (River and Harbor Improvement.)

Arundel Corp., The, Baltimore, Md.
 Atlantic Gulf and Pacific Co., New York.

—Machinery.

American Steel Dredge Co., Fort Wayne, Ind.
 Elliott Machine Corp., Baltimore, Md.
 Hayward Co., The, New York.

DRILLING CONTRACTORS.

Mott Core Drilling Co., Huntington, W. Va.
 Pennsylvania Drilling Co., Pittsburgh, Pa.
 Southern Drilling Co., Saltville, Va.
 Sprague & Henwood, Inc., Scranton, Pa.

DRILLS (Artesian Well.)

Virginia Machinery & Well Co., Inc., Richmond, Va.

—(Electric.)

Chicago Pneumatic Tool Co., New York.
 Sullivan Mch. Co., Chicago.

—(Pneumatic.)

Chicago Pneumatic Tool Co., New York.
 Ingersoll-Rand Co., New York, N. Y.
 Sullivan Machinery Co., Chicago, Ill.

DRINKING FOUNTAINS.

Rundie-Spence Mfg. Co., Milwaukee, Wis.
 Taylor Co., Halsey W., Warren, Ohio.

DROP-FORGING MACHINERY.

Bliss Co., E. W., Brooklyn, N. Y.

DRYERS (Gravel and Sand.)

Ripley Fdy. & Mch. Co., Ripley, Ohio.

DRY KILNS and Equipment.

Moore Dry Kiln Co., Jacksonville, Fla.

DRYING MACHINERY.

American Process Co., New York, N. Y.

DUMP TRUCK BODIES and HOISTS.

Commercial Shearing & Stamping Co., Youngstown, Ohio.
 Easton Car & Construction Co., Easton, Pa.
 Lee Trailer & Body Co., Inc., Plymouth, Ind.

DUSTPROOFING (Concrete.)

Sonneborn Sons, Inc., L., New York.

DYESTUFFS.

Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.

DYNAMITE (Industrial and Agricultural.)

Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
 Hercules Powder Co., Inc., Wilmington, Del.

ELECTRICAL Instruments and Supplies.

Adams Electric Co., Frank, St. Louis.
 General Electric Co., Schenectady, N. Y.
 Western Electric Co., New York City.

—Machinery (Generators, Motors, etc., New.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
 Elliott, Howard C., Miami, Fla.
 Fairbanks, Morse & Co., Chicago, Ill.
 General Electric Co., Schenectady, N. Y.
 Howell Electric Motors Co., Howell, Mich.
 Rockford Power Machy. Co., Rockford, Ill.
 Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa.

—Machinery (Generators, Motors, etc., Used.)

Balyea Co., Inc., New York City.
 Delta Equipment Co., Philadelphia, Pa.
 Electric Service Co., Cincinnati, Ohio.
 Electrical Equip. Co., Raleigh, N. C.
 General Electric Co., Schenectady, N. Y.
 Gregory Electric Co., Chicago.
 Nashville Industrial Corp., Old Hickory, Tenn.
 Nussbaum & Co., V. M., Ft. Wayne, Ind.
 O'Brien Machinery Co., The, Phila., Pa.
 Handle Machinery Co., The, Cincinnati, O.
 Rockford Power Machy. Co., Rockford, Ill.
 Stewart Elec. Co., John A., Cincinnati.

—Machinery Repairing (Motors, Generators, etc.)

Electric Service Co., Cincinnati, Ohio.
 Gregory Electric Co., Chicago.

ELECTRIC LIGHTING.

General Electric Vapor Lamp Co., Hoboken, N. J.

ELECTRIC SHOVELS (See Shovels.)**ELEVATOR Cables.**

Leschen & Sons Rope Co., A., St. Louis.

—Enclosures.

Dufur, Baggott & Co., Baltimore, Md.

—(Equalizers.)

Evans Elevator Equalizer Co., Bedford, Ind.

ELEVATORS (Electric.)

American Elevator & Machine Co., Inc., Louisville, Ky.
 Millner Co., St. Louis, Mo.

—(Hand and Belt Power.)

American Elevator & Machine Co., Inc., Louisville, Ky.
 Millner Co., St. Louis, Mo.

—(Hydraulic.)

American Elevator & Machine Co., Inc., Louisville, Ky.

—(Portable.)

O. K. Clutch & Machy. Co., Columbia, Pa.

ENGINEERS (Airports.)

Jenny, L. Alfred, Dument, N. J.
 MacElwhee & Crandall, Inc., Cambridge, Mass.
 Miller & Asso., Wendell P., Chicago, Ill.
 Shaw Co., Russell B., St. Louis, Mo.

—(Appraisal.)

American Appraisal Co., Milwaukee, Wis.
 Bartlett Engrs., Inc., Terrell, San Antonio, Texas.

Bailey & Kipp, Inc., Chicago, Ill.
 Fay, Spofford & Thorndike, Boston, Mass.
 Ford, Bacon & Davis, Inc., New York.
 Harrison, Wm. Henry, Washington, D. C.
 Jenny, L. Alfred, Dument, N. J.
 Lockwood Greene Engrs., Inc., New York City.

Ludlow Engineers, Winston-Salem, N. C.
 Main, Inc., Chas. T., Boston, Mass.
 Sanderson & Porter, New York, N. Y.
 Wadleigh & Bailey, Washington, D. C.
 White Engineering Corp., J. G., New York.

Wiedeman and Singleton, Inc., Atlanta.

Williamson, Lee H., Charlottesville, Va.

—(Aviation.)

Miller & Asso., Wendell P., Chicago, Ill.
 Shaw Co., Russell B., St. Louis, Mo.

—(Bridge.)

Atlantic Bridge Co., Greensboro, N. C.
 Billingsley, James W., New Orleans, La.
 Fay, Spofford & Thorndike, Boston, Mass.
 Freeland, Roberts & Co., Nashville, Tenn.
 Gardner & Howe, Memphis, Tenn.
 Greiner & Co., J. E., Baltimore, Md.
 Harward Contracting Co., Columbus, Ga.
 Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
 Howerton Engineering Co., Asheville, N. C.
 Steel & Leiby, Knoxville, Tenn.
 Turner, C. A. P., Minneapolis, Minn.
 Virginia Bridge & Iron Co., Roanoke, Va.
 Wheeler, Walter H., Minneapolis, Minn.

—(Chemical.)

Barrow-Agoc Laboratories, Memphis, Tenn.
 Dow & Smith, New York, N. Y.
 Flood & Co. Walter H., Chicago, Ill.
 Picard Laboratories, Birmingham, Ala.
 Pittsburgh Testing Laboratories, Pittsburgh, Pa.

—(Civil.)

Airmap Corp. of Amer., Brooklyn, N. Y.
 Battery & Kipp, Inc., Chicago, Ill.
 Charlton & Davis, Ft. Lauderdale, Fla.
 Fuller & McClintock, New York, N. Y.
 Gardner & Howe, Memphis, Tenn.
 Greiner & Co., J. E., Baltimore, Md.
 Harrah Engr. Co., C. N., Nashville, Tenn.
 Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
 Hills Co. George B., Jacksonville, Fla.
 MacElwhee & Crandall, Inc., Cambridge, Mass.
 Main, Inc., Chas. T., Boston, Mass.
 McCrady Co., John, Charleston, S. C.
 Platt, William M., Durham, N. C.
 Spoon & Lewis, Greensboro, N. C.
 Spring, Charles Herbert, Greensboro, N. C.
 Steel & Leiby, Knoxville, Tenn.
 White Engr. Corp., J. G., New York.

—(Consulting.)

Airmap Corp. of Amer., Brooklyn, N. Y.
 Barstow & Co., W. E., Reading, Pa.
 Biggs Engr. Co., W. M., Knoxville, Tenn.
 Charlton & Davis, Ft. Lauderdale, Fla.
 Converse & Co., J. B., Mobile, Ala.
 Engineering Service Corp., Houston, Tex.
 Harrison, Wm. Henry, Washington, D. C.
 Harza Engineering Co., Chicago.
 Hedrick, Inc., Ira G., Hot Springs, Nat'l Park, Ark.
 Herby, Charles H., New York City.
 Lockwood Greene Engrs., Inc., New York City.
 Main, Inc., Chas. T., Boston, Mass.
 McCrady Co., John, Charleston, S. C.
 Ophuls & Hill, Inc., New York, N. Y.
 Simmons, Inc. & Associates, B. Stanley, Washington, D. C.
 Smith, Elroy G., Augusta, Ga.
 Stillman & Van Sclen, New York, N. Y.
 Wadleigh & Bailey, Washington, D. C.
 White Engineering Corp., J. G., New York.
 Wiedeman & Singleton, Inc., Atlanta, Ga.
 Williamson, Lee H., Charlottesville, Va.



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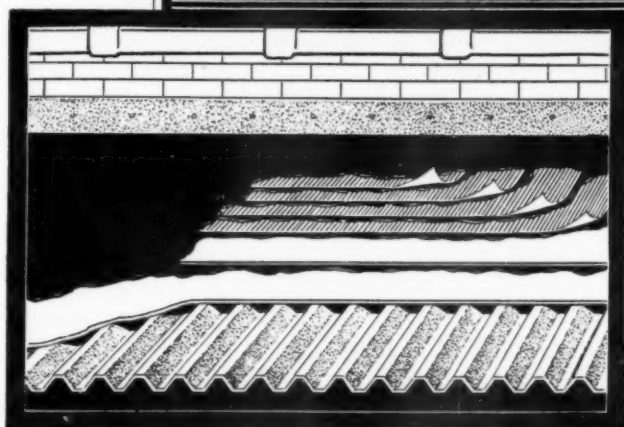
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The steel roof deck is probably the most important modern development in the construction of roofs. Its strength, its lightness, its rigidity, and its freedom from warping enable it to strike at many of the age-old causes of roof failures. It brings the roof into step with the modern steel-frame building.

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If you are planning a building, send to the Robertson engineers for information about the V-Beam Steel Deck. If you have any troubles with your roofs, write to the Robertson Company about them. If you are not thoroughly familiar with the steel roof decks, let us send you information about them and their advantages. If you are familiar with the steel deck, but not with the protected steel deck, write for facts about it.

H. H. ROBERTSON CO., PITTSBURGH, PA.



- National Cast Iron Pipe Co.**, Birmingham, Ala.
Taylor Forge & Pipe Wks., Chicago, Ill.
U. S. Pipe & Foundry Co., Burlington, N. J.
Vest Mch. Co., Henry, Louisville, Ky.
—and Flanged Fittings.
Grinnell Co., Inc., Providence, R. I.
- FLOOR (Asphalt Mastic.)**
Barber Asphalt Co., Philadelphia, Pa.
—(Asphalt Plank.)
Servicised Premoulded Products, Inc., Chicago, Ill.
—(Composition.)
Johns-Manville Corp., New York, N. Y.
—(Cork Composition.)
Congoleum-Nairn, Inc., Kearny, N. J.
—(Hardwood, Maple, Oak.)
Nashville Hardwood Flooring Co., Nashville, Tenn.
—(Northern Hard Maple.)
Holt Hardwood Co., Oconto, Wis.
—(Open Steel.)
Blaw-Knox Co., Pittsburgh, Pa.
Irving Iron Works Co., Long Is. City, N. Y.
Kerlow Steel Flooring Co., Jersey City, N. J.
—(Rubber and Cork.)
Congoleum-Nairn, Inc., Kearny, N. J.
—Anchors.
Bull Dog Floor Clip Co., Winterest, Iowa.
—Covering.
Congoleum-Nairn, Inc., Kearny, N. J.
—Hardener (Concrete.)
Sonneborn Sons, Inc., L. A., New York.
Stenhard Co., Phila., Pa.
—Plates and Stair Treads.
American Pressed Steel Co., Phila., Pa.
Central Iron & Steel Co., Harrisburg, Pa.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
—Steel (For Concrete Culverts, Roads, Streets.)
Blaw-Knox Co., Pittsburgh, Pa.
—Wax.
Congoleum-Nairn, Inc., Kearny, N. J.
—(Wood) Preservative.
Stenhard Co., Phila., Pa.
- FLUSH-TANK SIPHONS.**
Kaustline Co., Inc., Perry, N. Y.
Pacific Flush-Tank Co., New York, N. Y.
- FLYER PRESSERS.**
Southern Spindle & Flyer Co., Charlotte, N. C.
- FLYERS.**
Southern Spindle & Flyer Co., Charlotte, N. C.
- FORGINGS (Drop.)**
Vest Mch. Co., Henry, Louisville, Ky.
- FORMS, Steel (For Concrete, Culverts, Roads, Streets, Curbs, Sidewalks, Tiles.)**
Blaw-Knox Co., Pittsburgh, Pa.
- FOUNDATION MASONRY.**
Calligan Co., A. H., Richmond, Va.
- FOUNDRIES and Machine Shops.**
Deemer Steel Casting Co., New Castle, Del.
General Machine Works, York, Pa.
Giamorgan Pipe & Fdry. Co., Lynchburg, Va.
Goldens' Fdry. & Mch. Co., Columbus, Ga.
Lombard Iron Works & Supply Co., Augusta, Ga.
Moccasin Bushing Co., Chattanooga, Tenn.
- FOUNDRY Equipment and Supplies.**
Chain Belt Co., Milwaukee, Wis.
Hill & Griffith Co., The, Cincinnati, O.
—Facings (Talc and Soapstone.)
Hill & Griffith Co., The, Cincinnati, O.
- FUMIGATORS (Fruit, Nuts, Nursery Stock, etc.)**
Union Tank & Pipe Co., Los Angeles, Cal.
- FURNACES (Industrial.)**
Combustion Engr., Corp., New York City.
—(Water-Cooled.)
Combustion Engr. Corp., New York City.
Fuller Lehigh Co., Fullerton, Pa.
- GALVANIZED Products.**
Birmingham Galvanizing Co., Birmingham, Ala.
Cattle & Bros., Jos. F., Philadelphia, Pa.
—Steel and Iron.
American Rolling Mill Co., Middletown, O.
- American Sheet & Tin Plate Co.**, Pittsburgh, Pa.
Granite City Steel Co., Granite City, Ill.
Republic Steel Corp., Youngstown, Ohio.
- GALVANIZING (Cadmium Plating.)**
Birmingham Galvanizing Co., Birmingham, Ala.
—(Hot Dip.)
Bessemer Galvanizing Works, Birmingham.
Birmingham Galvanizing Co., Birmingham, Ala.
Cattle & Bros., Jos. F., Philadelphia, Pa.
Newport News Shipbuilding & Drydock Co., Newport News, Va.
- GARAGES (Metal.)**
Maryland Metal Building Co., Balto., Md.
- GARBAGE DISPOSAL SYSTEMS**
Seacell Corp., New York, N. Y.
- GAS HOLDERS.**
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Works, Atlanta, Ga.
—Producers.
Gas-O-Flame Stove Works, Port Deposit, Md.
Morgan Construction Co., Worcester, Mass.
Wood & Co., R. D., Philadelphia, Pa.
- GASOLINE and KEROSENE.**
Gulf Refining Co., Pittsburgh, Pa.
- GASOLINE SHOVELS (See Shovels.)**
- GATES (Automatic Drainage.)**
Armco Culvert Mfrs. Assn., Middletown, O.
Dixie Culvert & Metal Co., Atlanta, Ga.
Dixie Culvert Mfg. Co., Little Rock, Ark.
Louisiana Corr. Culvert Co., Baton Rouge, La.
Tenn. Metal Culvert Co., Nashville, Tenn.
Western Metal Mfg. Co., Houston, Texas.
- GAUGE GLASSES.**
Jenkins Bros., New York, N. Y.
- GEARS.**
DeLaval Steam Turbine Co., Trenton, N. J.
Earle Gear & Machine Co., Phila., Pa.
General Electric Co., Schenectady, N. Y.
—(Worm Reduction.)
DeLaval Steam Turbine Co., Trenton, N. J.
- GENERATORS, MOTORS (New.)**
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
General Electric Co., Schenectady, N. Y.
Howell Electric Motors Co., Howell, Mich.
Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.
—(Used.)
Balyea Co., Inc., New York City.
Electrical Equip. Co., Raleigh, N. C.
Gregory Electric Co., Chicago.
Nashville Ind. Corp., Old Hickory, Tenn.
Nussbaum & Co., V. M., Ft. Wayne, Ind.
O'Brien Machinery Co., Phila., Pa.
Randle Machinery Co., The, Cincinnati, O.
Stewart Elec. Co., John A., Cincinnati, O.
- GEOLOGISTS. (See Engineers, Geological.)**
- GLASS (Art.)**
Binswanger & Co., Memphis, Tenn.
Hires Turner Glass Co., Philadelphia, Pa.
—(Plate.)
Binswanger & Co., Inc., Memphis, Tenn.
Blue Ridge Glass Corp., Kingsport, Tenn.
Hires Turner Glass Co., Philadelphia, Pa.
—(Window.)
Blue Ridge Glass Corp., Kingsport, Tenn.
Hires Turner Glass Co., Philadelphia, Pa.
—(Wire.)
Blue Ridge Glass Corp., Kingsport, Tenn.
Hires Turner Glass Co., Phila., Pa.
- GRADERS (Elevating.)**
Adams Co., J. D., Indianapolis, Ind.
Caterpillar Tractor Co., San Leandro, Calif.
—(Leaning Wheel Road.)
Adams Co., J. D., Indianapolis, Ind.
—(One Man Motor.)
Adams Co., J. D., Indianapolis, Ind.
Riddell Co., W. A., Bucyrus, Ohio.
- GRAPHITE.**
Dixon Crucible Co., Jos., Jersey City, N. J.
- GRATES and Grate Bars.**
Schofield's Sons Co., J. S., Macon, Ga.
Vogt Machine Co., Henry, Louisville, Ky.
- GRATING (Area, Flooring, Sidewalk.)**
Bates Steel Corp., Walter, Gray, Ind.
Blaw-Knox Co., Pittsburgh, Pa.
Hendrick Mfg. Co., Carbondale, Pa.
Irving Iron Works, Long Is. City, N. Y.
Kerlow Steel Flooring Co., Jersey City, N. J.
- GRAVEL (Roofing and Road.)**
American Limestone Co., Knoxville, Tenn.
Arundel Corp., The, Baltimore, Md.
Borley & Co., W. W., Roanoke, Va.
Friend & Co., Inc., Petersburg, Va.
- GREASE CUPS.**
Lunkenheimer Co., The, Cincinnati, O.
- GRILLES (Brass, Bronze, Steel, etc.)**
Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.
- GRINDERS (Cylinder.)**
Hutto Engineering Co., Detroit, Mich.
—(Electric.)
Chicago Pneumatic Tool Co., New York.
—(Gypsum, Limestone, etc.)
Raymond Bros. Impact Pulv. Co., Chicago.
- GRINDING MACHINERY (Flexible Shaft.)**
Hutto Engineering Co., Detroit, Mich.
Strand & Co., N. A., Chicago, Ill.
—Wheels.
Carborundum Co., Niagara Falls, N. Y.
- GUARD RAIL (Road.)**
National Traffic Guard Co., Atlanta.
- GUNITE CONSTRUCTION.**
Cement-Gun Co., Inc., Allentown, Pa.
Cement Gun Construction Co., Chicago.
Gunite Conc. & Constr. Co., Kansas City.
Gunite Constr. Co., New York City.
Bust Engineering Co., Birmingham, Ala.
- GUNPOWDER.**
Du Pont de Nemours & Co., Inc., E. I., Wilmington, Del.
Hercules Powder Co., Inc., Wilmington, Del.
- GUNS (Hydraulic.)**
Georgia Iron Works, Augusta, Ga.
- HANGARS (Airplane.)**
Blaw-Knox Co., Pittsburgh, Pa.
Braden Steel Corp., Tulsa, Okla.
Ingalls Iron Works, Birmingham, Ala.
Maryland Metal Bldg. Co., Balto., Md.
- HANGERS (Door, All Kinds.)**
Richards-Wilcox Mfg. Co., Aurora, Ill.
—(Line Shaft.)
American Pulley Co., Philadelphia, Pa.
Wood's Sons Co., T. B., Chambersburg, Pa.
- HARBOR IMPROVEMENTS.**
Arundel Corp., Baltimore, Md.
Atlantic, Gulf & Pacific Co., New York.
- HARDWARE (Door.)**
Richards-Wilcox Mfg. Co., Aurora, Ill.
- HEATERS (Asphalt.)**
Honhorst Co., Jos., Cincinnati, O.
- HEATING Apparatus (Engineers and Contractors.)**
Grinnell Co., Inc., Providence, R. I.
Skinner Bros. Mfg. Co., St. Louis, Mo.
—Systems.
Clarage Fan Co., Kalamazoo, Mich.
Skinner Bros. Mfg. Co., St. Louis, Mo.
- HOISTING MACHINERY.**
Clyde Iron Works Sales Co., Duluth, Minn.
- HOISTS (Air Portable.)**
Ingersoll-Rand Co., New York, N. Y.
Sullivan Machinery Co., Chicago, Ill.
—(Chain.)
Harrington Co., The, Philadelphia, Pa.
—(Electric.)
Clyde Iron Works Sales Co., Duluth, Minn.
Harndischfeger Corp., Milwaukee, Wis.
Milwaukee Elec. Crane & Hoist Corp., Milwaukee, Wis.
Mundy Hoisting Engine Co., J. S., Newark, N. J.
Nove Engine Co., Lansing, Mich.
O. K. Clutch & Mch. Co., Columbia, Pa.
Street Bros. Mch. Wks., Chattanooga, Tenn.
—(Gasoline.)
Clyde Iron Works Sales Co., Duluth, Minn.
- Dake Engine Co.**, Grand Haven, Mich.
Mundy Hoisting Engine Co., J. S., Newark, N. J.
National Equipment Corp. (C. H. & E. Division), Milwaukee, Wis.
Nove Engine Co., Lansing, Mich.
O. K. Clutch & Mch. Co., Columbia, Pa.
Street Bros. Mch. Wks., Chattanooga, Tenn.
- (Hand Power.)**
O. K. Clutch & Mch. Co., Columbia, Pa.
- (Steam.)**
Clyde Iron Works Sales Co., Duluth, Minn.
Dake Engine Co., Grand Haven, Mich.
Mundy Hoisting Engine Co., J. S., Newark, N. J.
Street Bros. Mch. Wks., Chattanooga, Tenn.
- HOOPS, Bands, etc. (Galvanized.)**
Connors Steel Co., Birmingham, Ala.
- HOPPERS (Aggregate, Measuring and Weighing.)**
Blaw-Knox Co., Pittsburgh, Pa.
- HOSE (Rubber.)**
Republic Rubber Co., Youngstown, Ohio.
- HOTELS.**
Helms Hotel Systems, St. Louis, Mo.
Murphy's Hotel, Richmond, Va.
Rice Hotel, Houston, Texas.
Southern Hotel, The, Baltimore, Md.
- HOUSE MOVING.**
Eichley, Jr. Co., John, Pittsburgh.
- HULLS (Steel.)**
American Steel Dredge Co., Fort Wayne, Ind.
- HUMIDIFYING AND DRYING EQUIPMENT.**
Grinnell Co., Inc., Providence, R. I.
Skinner Bros. Mfg. Co., St. Louis, Mo.
- HYDRANTS (Fire.)**
Columbian Iron Works, Chattanooga, Tenn.
Ludlow Valve Mfg. Co., The, Troy, N. Y.
Myers & Bro. Co., The, F. R., Ashland, O.
Vogt Brothers Mfg. Co., Louisville, Ky.
Wood & Co., R. D., Philadelphia, Pa.
- HYDRO - ELECTRIC POWER COMPANIES (Offering Industrial and Commercial Opportunities.)**
Alabama Power Co., Birmingham, Ala.
Central Power & Light Co., San Antonio.
Georgia Power Co., Atlanta, Ga.
Texas Power & Light Co., Dallas, Texas.
- ICE and Refrigerating Machinery and Supplies.**
Ingersoll-Rand Co., New York, N. Y.
Vogt Mch. Co., Henry, Louisville, Ky.
- INCINERATORS.**
Duplex Hanger Co., Cleveland, Ohio.
Swenson Evaporator Co., Harvey, Ill.
- INCORPORATORS.**
Corporation Service Co., Wilmington, Del.
Delaware Registration Trust Co., Wilmington, Del.
- INJECTORS.**
Jenkins Bros., New York, N. Y.
Randle Machinery Co., The, Cincinnati, O.
- INSULATING MATERIALS.**
General Electric Co., Schenectady, N. Y.
Johns-Manville Corp., New York, N. Y.
Okonite Co., New York, N. Y.
- INVESTMENT SECURITIES.**
Electric Bond & Share Co., New York.
Gay & Co., W. O., New York City.
Hanchett Bond Co., Inc., The, Chicago, Ill.
Marx & Co., Birmingham, Ala.
Mercantile Trust Co., Baltimore, Md.
Nureen & Co., John, Chicago.
Peabody & Co., Chicago.
Provident Savings Bank & Trust Co., Cincinnati, Ohio.
Robinson-Humphrey Co., Atlanta, Ga.
Seasongood & Mayer, Cincinnati, O.
Taylor, Wilson & Co., Inc., Cincinnati, O.
- IRON.**
Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.
—(Ingot, For Culverts, etc.)
American Rolling Mill Co., Middletown, O.
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Leadite Co., The, Philadelphia, Pa.

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Myers & Bro. Co., The F. E., Ashland, O.

—(Wooden.)

Dayton Safety Ladder Co., Cincinnati, O.

Patent Scaffolding Co., Chicago, Ill.

LAMPS (Incandescent.)

General Electric Vapor Lamp Co., Hoboken, N. J.

Western Electric Co., New York City.

LATH (Metal.)

Ingalls Iron Works Co., Birmingham, Ala.

LATHES.

Sebastian Lathe Co., Cincinnati, Ohio.

LAWN FURNITURE (Wire.)

Dufur, Baggott & Co., Baltimore, Md.

LIGHTING (Factory and Mill.)

General Electric Vapor Lamp Co., Hoboken, N. J.

—Fittings (Electric.)

Western Electric Co., New York City.

LIME RECOVERY SYSTEMS.

Swenson Evaporator Co., Harvey, Ill.

LININGS (Flue, Fire Clay.)

Lee Clay Products Co., Clearfield, Ky.

Owensboro Sewer Pipe Co., Owensboro, Ky.

—(Tube Mill.)

Fuller Lehigh Co., Fullerton, Pa.

LINOLEUM (Battleship, Jasper.)

Congoleum-Nairn, Inc., Kearny, N. J.

LITHOGRAPHERS and ENGRAVERS.

Smith & Son Co., Oscar T., Baltimore, Md.

Young & Selden Co., Baltimore, Md.

LOADING and UNLOADING MACHINERY (Portable.)

Barber-Greene Co., Aurora, Ill.

Northwest Engineering Co., Chicago, Ill.

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Porter Co., H. K., Pittsburgh, Pa.

—(Electric.)

Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.

—(Fireless Steam.)

Porter Co., H. K., Pittsburgh, Pa.

—(Gasoline.)

Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.

Porter Co., H. K., Pittsburgh, Pa.

Whitecomb Co., Geo. D., Rochelle, Ill.

—(Industrial.)

Birmingham Rail & Locomotive Co., Birmingham, Ala.

Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.

Porter Co., H. K., Pittsburgh, Pa.

Southern Iron & Equipment Co., Atlanta, Ga.

Whitecomb Co., Geo. D., Rochelle, Ill.

—(Mining.)

Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.

Porter Co., H. K., Pittsburgh, Pa.

Whitecomb Co., Geo. D., Rochelle, Ill.

—(Railway.)

Cincinnati Car Corp. (Locomotive Div.), Cincinnati, Ohio.

Porter Co., H. K., Pittsburgh, Pa.

Southern Iron & Equipment Co., Atlanta, Ga.

Whitecomb Co., Geo. D., Rochelle, Ill.

LOGGING MACHINERY.

Clyde Iron Works Sales Co., Duluth, Minn.

LOOM PICK COUNTER

Veeder-Root, Inc., Hartford, Conn.

LUBRICANTS.

Dixon Crucible Co., Jos., Jersey City, N. J.

Gulf Refining Co., Pittsburgh, Pa.

LUBRICATORS, (Force Feed.)

Lunkheimer Co., The, Cincinnati, O.

LUBRICATION SYSTEMS.

Alomite Corp., Chicago, Ill.

LUMBER (Ceiling, Flooring, Siding.)

Industrial Lumber Co., Elizabeth, La.

Kirby Lumber Co., Houston, Texas.

—(Creosoted.)

Amer. Creosote Wks., Inc., New Orleans, La.

Amer. Creosoting Co., Inc., Louisville, Ky.

Ayer & Lord Tie Co., Inc., Chicago.

Delaware Wood Preserving Co., Phila.

Eppinger & Russell Co., New York, N. Y.

Gulf States Creos. Co., Hattiesburg, Miss.

Pettigrew & Sons, J. F., Charleston, S. C.

Savannah Creos. Co., Savannah, Ga.

—(Heavy Construction, Pitch, Pine, etc.)

Industrial Lumber Co., Elizabeth, La.

Kirby Lumber Co., Houston, Texas.

—(Zinc Meta Arsenite Treated.)

Curtin-Howe Corp., New York City.

MACHINERY (Special.)

Bliss Co., E. W., Brooklyn, N. Y.

Earle Gear & Machine Co., Phila., Pa.

Fornholt Machinery Co., St. Louis, Mo.

General Machine Works, York, Pa.

—and Supplies (New and Used.)

Batty Machine & Mfg. Co., Hammond, Ind.

Belyea Co., Inc., New York City.

Dempster Equip. Co., Knoxville, Tenn.

Electric Service Co., Cincinnati, Ohio.

Equip. Sales & Rentals Co., Pittsburgh.

Heineken Engineering Corp., New York.

Marine Metal & Supply Co., New York.

Nashville Ind. Corp., Old Hickory, Tenn.

O'Brien Machinery Co., The, Phila., Pa.

Randle Machinery Co., The, Cincinnati, O.

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

Seyfert's Sons, Inc., L. F., Phila., Pa.

Zelnicker Supply Co., W. A., St. Louis.

MACHINE TENDERS (Steel.)

Angle Steel Steel Co., Plainwell, Mich.

—(Tools.)

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

Sebastian Lathe Co., Cincinnati, Ohio.

—(Used.)

Delta Equipment Co., Philadelphia, Pa.

O'Brien Machinery Co., Phila., Pa.

MAIL CHUTES.

Cutler Mail Chute Co., Rochester, N. Y.

MARBLE (Producers and Manufacturers.)

Georgia Marble Co., Tate, Ga.

MATERIAL ELEVATORS.

National Equipment Corp. (Insley, C. H. & E.), Milwaukee, Wis.

METAL-Cutting Machinery.

Atkins & Co., E. C., Indianapolis, Ind.

Earle Gear & Machine Co., Phila., Pa.

—Working Machinery.

Bliss Co., E. W., Brooklyn, N. Y.

MILL MACHINERY and SUPPLIES.

Lombard Iron Works & Supply Co., Augusta, Ga.

MINING MACHINERY.

McLanahan-Stone Machine Co., Hollidaysburg, Pa.

MIXERS.

National Equipment Corp. (Kochring, T. L. Smith, Kwik-Mix), Milwaukee, Wis.

—(Asphalt.)

Erie Machine Shops, Erie, Pa.

—(Hot.)

Kochring Co., Milwaukee, Wis.

—(Plaster.)

Blystone Mfg. Co., Cambridge Springs, Pa.

Chain Belt Co., Milwaukee, Wis.

Dunning & Boeschert Press Co., Syracuse, N. Y.

Jaeger Machine Co., Columbus, Ohio.

MORTAR MIXERS.

Chain Belt Co., Milwaukee, Wis.

Jaeger Machine Co., Columbus, Ohio.

—Ingredient.

Louisville Cement Co., Louisville, Ky.

MOTORS (Electric.)

Fairbanks, Morse & Co., Chicago, Ill.

General Electric Co., Schenectady, N. Y.

Howell Electric Motors Co., Howell, Mich.

Western Electric Co., New York City.

Westinghouse Elec. & Mfg. Co., E. Pitts-

burgh, Pa.

—(Gasoline.)

Wisconsin Motor Co., Milwaukee, Wis.

MOTOR TRUCKS.

International Harvester Co., of America, Inc., Chicago, Ill.

NAILS (Cut.)

Reading Iron Co., Reading, Pa.

—and Spikes.

American Steel & Wire Co., Balte, Md.

Gulf States Steel Co., Birmingham, Ala.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Youngstown Sheet & Tube Co., Youngs-

town, Ohio.

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(Offering Industrial and Commercial Opportunities.)

Arkansas Natural Gas Corp., Shreveport, La.

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Gulf Refining Co., Pittsburgh, Pa.

—Cups.

Lunkheimer Co., The, Cincinnati, O.

ORE-WASHING MACHINERY.

Georgia Iron Works, Augusta, Ga.

McLanahan Stone Machine Co., Hollidaysburg, Pa.

ORNAMENTAL BRONZE WORK.

Heath Co., J. S., Waukegan, Ill.

—Iron Work.

Roanoke Iron & Bridge Wks., Roanoke, Va.

Snead Architectural Iron Works, Louisville, Ky.

Southern Engineering Co., Charlotte, N. C.

Stewart Iron Works Co., Cincinnati, O.

PACKING (Asbestos, Metallic, Rubber, Leather, etc.)

Jenkins Bros., New York, N. Y.

Johns-Manville Corp., New York, N. Y.

Republic Rubber Co., Youngstown, Ohio.

PAINT (Aluminum.)

Aluminum Co. of America, Pittsburgh, Pa.

—(Metal Surfaces.)

Aluminum Co. of America, Pittsburgh, Pa.

Dixon Crucible Co., Jos., Jersey City, N. J.

—(Mill White, For Interior.)

Aluminum Co. of America, Pittsburgh, Pa.

Sonneborn Sons, Inc., L., New York.

—(Preservative.)

Cabot, Inc., Samuel, Boston, Mass.

Foster Co., Benjamin, Philadelphia, Pa.

PANELBOARDS.

Adam Elec. Co., Frank, St. Louis.

PARTITIONS (Metal, Folding, Rolling.)

Kinneair Mfg. Co., The, Columbus, Ohio.

Lupton's Sons Co., David, Phila., Pa.

—(Sectionfold, Rolling, Wood.)

Wilson Corp., The, J. G. New York.

PATENT ATTORNEYS.

Buck, Sterling P., Washington, D. C.

Coleman, Watson E., Washington, D. C.

Eaton, Paul B., Charlotte, N. C.

Sasnett, Edward C., Washington, D. C.

Seymour & Bright, Washington, D. C.

PATTERNS (Drawing, etc.)

Hess Pattern Co., A. W., Atlanta, Ga.

PAVING Blocks (Creosoted Wood.)

American Creosote Works, New Orleans.

—Blocks (Rubber.)

Servicised Premoulded Products, Inc., Chicago, Ill.

—Mixers.

National Equipment Corp. (Kochring, T. L. Smith), Milwaukee, Wis.

—Plant (Asphalt.)

Simplicity System Co., Chattanooga, Tenn.

PENSTOCKS.

Chattanooga Boiler & Tank Co., Chattanooga, Tenn.

Chicago Bridge & Iron Works, Atlanta.

Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Smith Co., S. Morgan, York, Pa.

PERFORATED METAL.

Chicago Perforating Co., Chicago, Ill.

Erdie Perforating Co., Rochester, N. Y.

Harrington & King Perf. Co., Chicago.

Hendrick Mfg. Co., Carbondale, Pa.

Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.

Mundi & Sons, Charles, Jersey City, N. J.

Nertmann-Duffke Co., Milwaukee, Wis.

PETROLEUM REFINERS.

Gulf Refining Co., Pittsburgh, Pa.

PHOSPHATE ACID.

Davison Chemical Co., Baltimore, Md.

—(Machinery.)

McLanahan-Stone Machine Co., Hollidaysburg, Pa.

PIG-IRON.

Hammond Iron Co., Birmingham, Ala.

Republic Steel Corp., Youngstown, Ohio.

Sloss-Sheffield Steel & Iron Co., Birmingham, Ala.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

PILE SHOES.

Janney, Jr., Jos. A., Phila., Pa.

PILING (Creosoted.)

Amer. Creosote Wks., Inc., New Orleans.

Amer. Creosoting Co., Inc., Louisville.

Ayer & Lord Tie Co., Inc., Chicago.

Pettigrew & Sons, J. F., Charleston, S. C.

Savannah Creosoting Co., Inc., Savannah.

Wales Wood-Preserving Co., Norfolk, Va.

—(Steel Sheet.)

Carnegie Steel Co., Pittsburgh, Pa.

Wemlinger, Inc., New York, N. Y.

Zelnicker Supply Co., W. A., St. Louis.

PILLOW BLOCKS.

Goldens' Fdry. & Mch. Co., Columbus, Ga.

PIPE.

Albert & Davidson Pipe Corp., Brooklyn, N. Y.

Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.

Birmingham Boiler & Engr. Co., Birmingham, Ala.

Central Pipe & Sup. Co., Charleston, W. Va.

Greenpoint Iron & Pipe Co., Inc., Brooklyn, N. Y.

Hammond Iron Co., Birmingham, Ala.

Hudson Pipe & Sup. Co., Bayonne, N. J.

National Tube Co., Pittsburgh, Pa.

Pittsburgh Piping & Equip. Co., Pittsburgh, Pa.

Power Piping Co., Pittsburgh, Pa.

Smith Corp., A. O., Milwaukee, Wis.

—(Cast Iron.)

Amer. Cast Iron Pipe Co., Birmingham.

Cast Iron Pipe Research Assn., Chicago.

Central Foundry Co., The, New York, N. Y.

Giamorgan Pipe & Fdry. Co., Lynchburg, Va.

National Cast Iron Pipe Co., Birmingham, Ala.

U. S. Pipe & Foundry Co., Burlington, N. J.

—(Dredge.)

Abendroth & Root Mfg. Co., New York.

—(Hammer-Welded.)

National Tube Co., Pittsburgh, Pa.

—(Iron and Steel.)

Ryerson & Son, Inc., Jos. T., St. Louis and New York.

—(Riveted.)

Abendroth & Root Mfg. Co., New York.

—(Second-Hand.)

Albert & Davidson Pipe Corp., Brooklyn, N. Y.

Albert Pipe Sup. Co., Inc., Brooklyn, N. Y.

Central Pipe & Sup. Co., Charleston, W. Va.

Greenpoint Iron & Pipe Co., Inc., Brooklyn, N. Y.

Hudson Pipe & Supply Co., Bayonne, N. J.

Marine Metal & Supply Co., New York.

—(S

PLATES (Steel.)

Bethlehem Steel Co., Bethlehem, Pa.
Carnegie Steel Co., Pittsburgh, Pa.
Central Iron & Steel Co., Harrisburg, Pa.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Granite City Steel Co., Granite City, Ill.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
Tennessee Coal, Iron & Railroad Co., Birmingham.

PNEUMATIC TOOLS.

Chicago Pneumatic Tool Co., New York.
Ingersoll-Rand Co., New York, N. Y.

POLES (Creosoted.)

Amer. Creosote Wks., Inc., New Orleans.
Amer. Creosoting Co., Inc., Louisville, Ky.
Ayer & Lord Tie Co., Inc., Chicago.
Brown Wood Preserving Co., Louisville, Ky.
Pretzman & Sons, J. F., Charleston, S. C.
Savannah Creosoting Co., Savannah, Ga.
Taylor-Colquhoun Co., Spartanburg, S. C.

(Steel.)

Bates Steel Corp., Walter, Gray, Ind.

(Tubular, Steel.)

National Tube Co., Pittsburgh, Pa.

(Zinc Meta Arsenite Treated.)

Curtin-Howe Corp., New York City.

POLISHING MACHINERY.

(Wheels, Blocks.)
Carborundum Co., Niagara Falls, N. Y.

PORTABLE HOUSES (Metal.)

Braden Steel Corp., Tulsa, Okla.
Maryland Metal Building Co., Balto., Md.

POST CAPS.

Duplex Hanger Co., Cleveland, Ohio.

POSTS (Cast Iron, Railway and Highway.)

U. S. Pipe & Foundry Co., Burlington, N. J.

POWER TRANSMISSION MACHINERY.

American Pulley Co., Philadelphia, Pa.
Diamond Chain & Mfg. Co., Indianapolis.
Golden's Fdry. & Mch. Co., Columbus, Ga.
Morris Chain Co., Ithaca, N. Y.
O'Brien Machinery Co., Phila., Pa.
Schofield's Sons Co., J. S., Macon, Ga.
Wood's Sons Co., T. B., Chambersburg, Pa.
(Pumps.)
Luitwiler Pumping Engine Co., Rochester, N. Y.

PREHEATERS (Air.)

Combustion Engr. Corp., New York City.

PRESSES (Baling, Cottonseed Oil, Hydraulic and Power.)

Dunning & Boshert Press Co., Inc., Syracuse, N. Y.
Ripley Foundry & Machine Co., Ripley, O.
(Hydraulic Wheel.)
Inter-State Fdry. & Mch. Wks., Johnson City, Tenn.
(Metal Stamping.)
Bliss Co., E. W., Brooklyn, N. Y.

PRINTERS (Book, Catalog, Job.)

Smith & Son Co., Oscar T., Baltimore Md.
Young & Selden Co., Baltimore, Md.

PRODUCER (Gas Machines.)

Gas-O-Flame Store Works, Port Deposit, Md.
Morgan Construction Co., Worcester, Mass.
Wood & Co., B. D., Phila., Pa.

FULLER-JACKS.

Edelblute Co., T. E., Pittsburgh, Pa.

PULLEYS (Friction Clutch.)

Caldwell Co., Inc., W. E., Louisville, Ky.
Schultz & Son, A. L., Chicago, Ill.
Wood's Sons Co., T. B., Chambersburg, Pa.
(Motor and Machine.)
American Pulley Co., Philadelphia, Pa.
(Steel Split.)
American Pulley Co., Phila., Pa.
(Shafting and Hangers.)
American Pulley Co., Phila., Pa.
Golden's Fdry. & Mch. Co., Columbus, Ga.
Wood's Sons Co., T. B., Chambersburg, Pa.

PULVERIZED FUEL EQUIPMENT.

Combustion Engr. Corp., New York City.
Fuller Lehigh Co., Fullerton, Pa.

PULVERIZERS (See Crushing and Pulverizing Machinery.)**PUMPING MACHINERY.**

American Well Works, Aurora, Ill.
Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.

Chain Belt Co., Milwaukee, Wis.
Cook, Inc., A. D., Lawrenceburg, Ind.
Fairbanks, Morse & Co., Chicago, Ill.
Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.
Keystone Pump & Drill Co., Beaver Falls, Pa.

Luitwiler Pumping Engine Co., Rochester, N. Y.
Myers & Bro. Co., The F. E., Ashland, Ohio.

National Equipment Corp. (C. H. & E. Division), Milwaukee, Wis.
Platt Iron Works, Dayton, Ohio.
Viking Pump Co., Cedar Falls, Iowa.
Virginia Mch. & Well Co., Richmond, Va.

PUMPS (Air.)

Manistee Iron Works Co., Manistee, Mich.
(Air Lift.)
Ingersoll-Rand Co., New York, N. Y.
Sullivan Machinery Co., Chicago, Ill.

(Boiler Feed.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.
DeLaval Steam Turbine Co., Trenton, N. J.
Erie Pump & Engine Wks., Medina, N. Y.
Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.
Manistee Iron Works Co., Manistee, Mich.
Myers & Bro. Co., The F. E., Ashland, O.

(Centrifugal.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
American Well Works, Aurora, Ill.
Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.
DeLaval Steam Turbine Co., Trenton, N. J.
Emerson Pump & Valve Co., Alexandria, Va.

Erie Pump & Engine Wks., Medina, N. Y.
Fairbanks, Morse & Co., Chicago, Ill.
Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.

Jaeger Machine Co., Columbus, Ohio.
Layne & Bowler, Inc., Memphis, Tenn.
Manistee Iron Works Co., Manistee, Mich.
Morris Machine Wks., Baldwinville, N. Y.
Novo Engine Co., Lansing, Mich.

(Contractors.)
Emerson Pump & Valve Co., Alexandria, Va.

Erie Pump & Engine Wks., Medina, N. Y.
Novo Engine Co., Lansing, Mich.

(Deep Well.)

American Well Works, Aurora, Ill.
Cook, Inc., A. D., Lawrenceburg, Ind.
Keystone Pump & Drill Co., Beaver Falls, Pa.
Layne & Bowler, Inc., Memphis, Tenn.
Luitwiler Pumping Engine Co., Rochester, N. Y.

Novo Engine Co., Lansing, Mich.

(Diaphragm.)

Novo Engine Co., Lansing, Mich.

(Hydraulic.)

Dunning & Boshert Press Co., Inc., Syracuse, N. Y.

(Power.)

American Well Works, Aurora, Ill.
Platt Iron Works, Dayton, Ohio.
Sterling Engine Co., Buffalo, N. Y.

(Pulverized Coal.)

Fuller Lehigh Co., Fullerton, Pa.

(Rotary.)

Viking Pump Co., Cedar Falls, Iowa.

(Sand and Dredging.)

Ellicott Machine Corp., Baltimore, Md.

Erie Pump & Engine Wks., Medina, N. Y.

Georgia Iron Works, Augusta, Ga.

(Steam.)

Cameron, A. S., Steam Pump Works (Ingersoll-Rand Co.), New York City.
Emerson Pump & Valve Co., Alexandria, Va.

Fairbanks, Morse & Co., Chicago, Ill.
Ingersoll-Rand Co. (A. S. Cameron Steam Pump Works), New York, N. Y.

Platt Iron Works, Dayton, Ohio.

(Vacuum.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Chicago Pneumatic Tool Co., New York.
Ingersoll-Rand Co., New York, N. Y.
Sullivan Machinery Co., Chicago, Ill.

(Water Works.)

American Well Works, Aurora, Ill.

Layne & Bowler, Inc., Memphis, Tenn.

Manistee Iron Works Co., Manistee, Mich.

PUNCHING AND SHEARING MACHINERY.

Beatty Machine & Mfg. Co., Hammond, Ind.
Bliss Co., E. W., Brooklyn, N. Y.
Whitney Metal Tool Co., Rockford, Ill.

RACK RAKES.

Newport News Shipbuilding & Drydock Co., Newport News, Va.

RADIATOR ENCLOSURES.

Manhattan Perforated Metal Co., Inc., Long Island City, N. Y.

RAILINGS (Iron Pipe.)

Pipe Railing Constr. Co., Long Island City, N. Y.

(and Grilles, Iron and Brass.)

Dufur, Baggett & Co., Baltimore, Md.
Ludlow Saylor Wire Co., The St. Louis, Mo.

RAILROAD Equipment and Supplies (New.)

Robinson & Orr, Pittsburgh, Pa.

Equipment and Supplies (Used.)

Birmingham Rail & Loco. Co., Birmingham.

Equip. Sales & Rentals Co., Pittsburgh.

Levis & Co., Henry, Philadelphia, Pa.

Penn Machinery Co., H. O., New York.

Smith & Co., W. M., Birmingham, Ala.

Southern Iron and Equip. Co., Atlanta.

Zelicker Supply Co., W. A., St. Louis.

(Frogs and Switches.)

Bethlehem Steel Co., Bethlehem, Pa.

Frank, M. K., Pittsburgh, Pa.

Koppel Ind. Car & Equip. Co., Koppel, Pa.

Robinson & Orr, Pittsburgh, Pa.

RAILROADS — (Offering Industrial, Agricultural and Commercial Opportunities.)

Atlanta and West Point R. R., Atlanta.

Central of Georgia Rwy., Savannah, Ga.

Missouri - Kansas - Texas Lines, Dallas, Texas.

Missouri-Pacific Lines, St. Louis, Mo.

Model Land Company, Flagler System, St. Augustine, Fla.

Norfolk & Western Railway, Roanoke, Va.

Tennessee Central Railway, Nashville, Tenn.

RAILS (New and Used.)

Birmingham Rail & Locomotive Co., Birmingham, Ala.

Carnegie Steel Co., Pittsburgh, Pa.

Frank, M. K., Pittsburgh, Pa.

Perry, Buxton, Doane Co., Philadelphia.

Robinson & Orr, Pittsburgh, Pa.

Smith & Co., W. M., Birmingham, Ala.

Southern Iron & Equip. Co., Atlanta, Ga.

Sweet's Steel Co., Williamsport, Pa.

Tennessee Coal, Iron & Railroad Co., Birmingham, Ala.

Veller & Co., Birmingham, Ala.

Zelicker Supply Co., W. A., St. Louis.

RAILWAYS (Industrial.)

Easton Car & Construction Co., Easton, Pa.

Koppel Ind. Car & Equip. Co., Koppel, Pa.

(Marine.)

Charleston Dry Dock and Machine Co., Charleston, S. C.

RECEPTACLES (Self-Closing.)

Waste Paper.)
Whittaker Paper Co., Baltimore, Md.

REELS and SPOOLS (Pressed Metal.)

American Pulley Co., Philadelphia, Pa.

REFRACATORIES.

Harbison-Walker Refractories Co., Pittsburgh.

Taylor Sons Co., Charles, Cincinnati.

REFRIGERATING MACHINERY

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—(Radio.)
Bessemer Galv. Wks., Birmingham, Ala.
—(Steel and Wood.)
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Cole Mfg. Co., R. D., Newnan, Ga.
- TRACK (Portable or Permanent.)**
Sweet's Steel Co., Williamsport, Pa.
- TRACTORS (Industrial.)**
Atlas Car & Mfg. Co., The, Cleveland, O.
Caterpillar Tractor Co., San Leandro, Cal.
Clark Tractor Co., Battle Creek, Mich.
Cleveland Tractor Co., Cleveland, Ohio.
International Harvester Co., of America, Inc., Chicago, Ill.
—(Road.)
Caterpillar Tractor Co., San Leandro, Cal.
Cleveland Tractor Co., Cleveland, Ohio.
—Attachments (Side Boom.)
W-K-M Co., Inc., Houston, Texas.
- TRAILERS (Four Wheel.)**
Electric Wheel Co., Quincy, Ill.
—(Heavy Duty.)
Electric Wheel Co., Quincy, Ill.
—(Industrial.)
Easton Car & Construction Co., Easton, Pa.
Electric Wheel Co., Quincy, Ill.
—(Pole.)
Electric Wheel Co., Quincy, Ill.
- TRAMWAYS (Aerial Wire Rope.)**
American Steel & Wire Co., Balto., Md.
Broderick & Bascom Rope Co., St. Louis.
Leschen & Sons Rope Co., A., St. Louis.
- TRANSFORMERS.**
General Electric Co., Schenectady, N. Y.
Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.
—(Used.)
Electric Service Co., Cincinnati, Ohio.
- TRANSMISSION TOWERS (Galvanized.)**
Bates Steel Corp., Walter, Gray, Ind.
Bessemer Galvanizing Works, Birmingham, Ala.
McClintic-Marshall Co., Pittsburgh, Pa.
- TRENCH MACHINERY. See Excavators (Trench.)**
- TRESTLES (Wooden.)**
Patent Scaffolding Co., Chicago, Ill.
- TRI-SODIUM PHOSPHATE.**
Grasselli Chemical Co., Inc., Birmingham, Ala.
- TROLLEY WHEELS (Self Oil-ing.)**
Moccasin Bushing Co., Chattanooga, Tenn.
- TRUCK CRANES.**
Universal Crane Co., Lorain, O.
- TRUCKS (Dry Kiln.)**
Moore Dry Kiln Co., Jacksonville, Fla.
—(Industrial.)
Atlas Car & Mfg. Co., The, Cleveland, O.
Clark Tractor Co., Battle Creek, Mich.
Lansing Co., Lansing, Mich.
Nutting Truck Co., Chicago, Ill.
Service Caster & Truck Co., Albion, Mich.
—(Motor.)
International Harvester Co., of America, Inc., Chicago, Ill.
- (Platform, Freight, Mill, Factory, etc.)
American Pulley Co., Philadelphia, Pa.
Clark Tractor Co., Battle Creek, Mich.
Electric Wheel Co., Quincy, Ill.
Nutting Truck Co., Chicago, Ill.
Service Caster & Truck Co., Albion, Mich.
Truscon Steel Co., (Pressed Steel Division) Cleveland, Ohio.
—(Steel Shop.)
Angle Steel Stool Co., Plainwell, Mich.
- TUBES (Boiler.) See Boiler Tubes.**
- TUBING (Metal.)**
Boiler Tube Co., of America, Pittsburgh, Pa.
—(Seamless Steel.)
National Tube Co., Pittsburgh, Pa.
Timken Rolling Bearing Co., Canton, O.
- TURBINES (Hydraulic.)**
Cook, Inc., A. D., Lawrenceburg, Ind.
Davis Foundry & Mach. Works, Rome, Ga.
Leffel & Co., The, James, Springfield, O.
Smith Co., S. Morgan, York, Pa.
—(Steam.)
Allis-Chalmers Mfg. Co., Milwaukee, Wis.
DeLaval Steam Turbine Co., Trenton, N. J.
General Electric Co., Schenectady, N. Y.
Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.
- TURNBUCKLES.**
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- TURNABLES.**
American Bridge Co., New York, N. Y.
Easton Car & Construction Co., Easton, Pa.
Virginia Bridge & Iron Co., Roanoke, Va.
—(Portable for Motor Trucks.)
Blaw-Knox Co., Pittsburgh, Pa.
- UNIONS.**
Dart Mfg. Co., E. M., Providence, R. I.
- UNIT HEATERS.**
Grinnell Co., Inc., Providence, R. I.
Skinner Bros., Mfg. Co., St. Louis, Mo.
- VALVES.**
Columbian Iron Works, Chattanooga, Tenn.
Jenkins Bros., New York, N. Y.
Ludlow Valve Mfg. Co., The, Troy, N. Y.
Lunkheimer Co., The, Cincinnati, Ohio.
Merco Nordstrom Valve Co., San Francisco, Cal.
Mueller Co., Decatur, Ill.
Vogt Brothers Mfg. Co., Louisville, Ky.
Westinghouse Traction Brake Co., Wilmerding, Pa.
—(Acid Proof.)
Lunkheimer Co., The, Cincinnati, O.
—(Gate.)
Ludlow Valve Mfg. Co., The, Troy, N. Y.
Lunkheimer Co., The, Cincinnati, Ohio.
Wood & Co., R. D., Philadelphia, Pa.
- VENTILATING SYSTEMS.**
Skinner Bros. Mfg. Co., St. Louis, Mo.
Swartwout Co., Cleveland, Ohio.
- VENTILATORS (Roof.)**
Merchant & Evans Co., Philadelphia, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
Robertson Co., H. E., Pittsburgh, Pa.
—(Rotary.)
Swartwout Co., Cleveland, Ohio.
- WALL HANGERS.**
Duplex Hanger Co., Cleveland, Ohio.
- WARDROBES (Hygienic, School.)**
Wilson Corp., The, J. G., New York.
- WATCHMAN'S PORTABLE CLOCKS.**
Davis-Paradis Watchman's Clock Corp., New York, N. Y.
Kaiser Klock Co., L. E., Balto., Md.
- WATERPROOFING (For Brick, Concrete, Granite.)**
Asphalt Products Co., Syracuse, N. Y.
Foster Co., Benjamin, Philadelphia, Pa.
Serricised Premoulded Products, Inc., Chicago, Ill.
Sennelborn, Sons, Inc., L., New York.
- WATER Purification.**
Roberts Filter Mfg. Co., Darby (Phila.), Pa.
Scaife & Sons, Wm. B., Oakmont, Pa.
—Softening Apparatus (Purifying.)
American Water Softener Co., Phila., Pa.
International Filter Co., Chicago, Ill.
—Works Supplies and Appliances.
Amer. Cast Iron Pipe Co., Birmingham.
Cast Iron Pipe Research Assn., Chicago.
- Columbian Iron Works, Chattanooga, Tenn.
Cook, Inc., A. D., Lawrenceburg, Ind.
Glasgow Pipe & Foundry Co., Lynchburg, Va.
Leadite Co., The, Philadelphia, Pa.
Mueller Co., Decatur, Ill.
U. S. Pipe & Foundry Co., Burlington, N. J.
Wood & Co., R. D., Philadelphia, Pa.
- WELDING APPARATUS (Electric Arc.)**
General Electric Co., Schenectady, N. Y.
Westinghouse Elec. & Mfg. Co., E. Pittsburgh, Pa.
—Apparatus (Oxy-Acetylene.)
St. Paul Welding & Mfg. Co., St. Paul, Minn.
- WELL CONTRACTORS (Oil, Artesian, etc.)**
Virginia Mach. & Well Co., Richmond, Va.
- WHEELBARROWS.**
Lansing Co., Lansing, Mich.
Sterling Wheelbarrow Co., Milwaukee.
- WHEELS AND AXLES.**
Carnegie Steel Co., Pittsburgh, Pa.
- WINCHES.**
Sagen Derrick Co., Chicago, Ill.
Schultz & Son, A. L., Chicago, Ill.
- WINDOW Frames and Sash (Metal.)**
Bayley Co., The, William, Springfield, O.
Lupton's Sons Co., David, Phila., Pa.
Truscon Steel Co., Youngstown, O.
- WINDOWS. (Steel Basement, Casement.)**
Bayley Co., The, William, Springfield, O.
Detroit Steel Products Co., Detroit, Mich.
Lupton's Sons Co., David, Phila., Pa.
—(Steel Garage.)
Detroit Steel Products Co., Detroit, Mich.
Lupton's Sons Co., David, Phila., Pa.
—(Steel Pivoted, Screened.)
Bayley Co., William, Springfield, O.
—(Ventilating.)
Bayley Co., The, William, Springfield, O.
Detroit Steel Products Co., Detroit, Mich.
Lupton's Sons Co., David, Phila., Pa.
- WIRE (All Kinds.)**
American Steel & Wire Co., Chicago.
Roebbing's Sons Co., John A., Trenton, N. J.
Ryerson & Son, Inc., Jos. T., St. Louis and New York.
—(Barbed Wire, etc.)
American Steel & Wire Co., Balto., Md.
Gulf States Steel Co., Birmingham, Ala.
Youngtown Sheet & Tube Co., Youngstown, Ohio.
—(Fence.)
Anchor Post Fence Co., Baltimore, Md.
Cyclone Fence Co., Waukegan, Ill.
Gulf States Steel Co., Birmingham, Ala.
Page Fence Association, Chicago, Ill.
—(Flat and Round.)
American Steel & Wire Co., Balto., Md.
—(Galvanized and Annealed.)
American Steel & Wire Co., Balto., Md.
Gulf States Steel Co., Birmingham, Ala.
—(Telephone and Telegraph.)
American Steel & Wire Co., Balto., Md.
—(Welding.)
American Steel & Wire Co., Chicago, Ill.
Roebbing's Sons Co., John A., Trenton, N. J.
—Cloth (Iron, Steel, Copper, Brass, etc.)
Harrington & King Perf. Co., Chicago.
Ludlow Saylor Wire Co., The, St. Louis, Mo.
—Goods.
Cyclone Fence Co., Waukegan, Ill.
Dufur, Baggott & Co., Baltimore, Md.
—Netting.
Ludlow Saylor Wire Co., The, St. Louis, Mo.
—Rope (Transmission, Hoisting, Haulage.)
American Steel & Wire Co., Chicago, Ill.
Broderick & Bascom Rope Co., St. Louis.
Leschen & Sons Rope Co., A., St. Louis.
Roebbing's Sons Co., John A., Trenton, N. J.
—Rope Clips.
American Steel & Wire Co., Balto., Md.
Broderick & Bascom Rope Co., St. Louis.
- WOOD (Preserved.)**
Delaware Wood Preserving Co., Phila.
- WOODWORKING MACHINERY.**
Wappat, Incorporated, Pittsburgh, Pa.
- ZINC CHLORIDE.**
Grasselli Chemical Co., Inc., Birmingham, Ala.
- ZINC META ARSENITE (Wood Preservative.)**
Curtin-Howe Corp., New York City.
Gulf States Cross. Co., Hattiesburg, Miss.

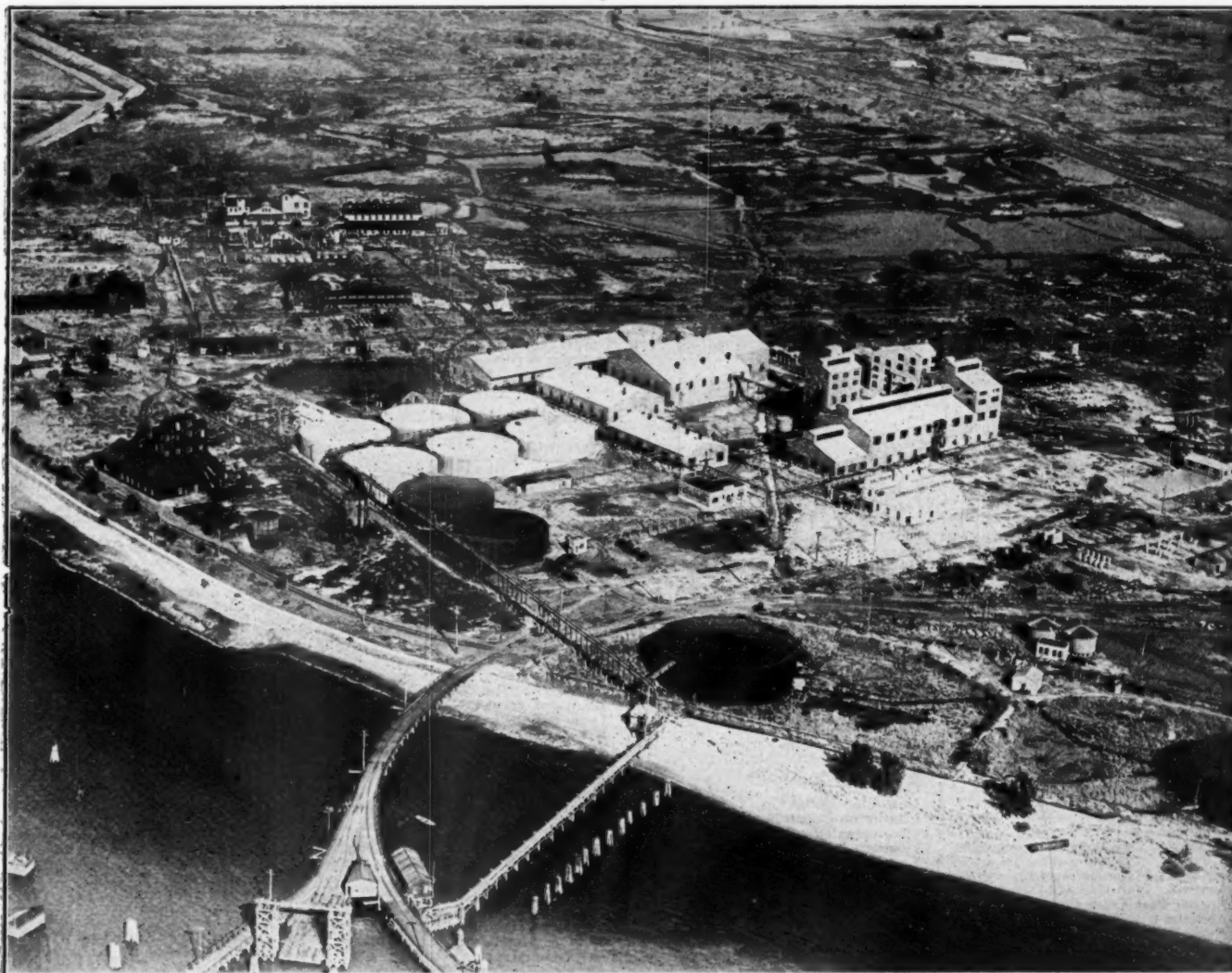
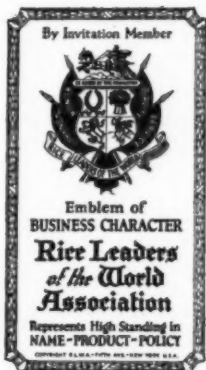


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HAMMOND TANKS

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Mueller Co.....
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Myers & Bro. Co., F. E.....

N

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Nashville Industrial Corp.....
National Blow Pipe & Mfg. Co., Ltd.....
National Cast Iron Pipe Co.....
National Equipment Corp.....
National Paving Brick Mfrs. Asso.....
National Traffic Guard Co.....
National Tube Co.....
Newport News Shipbuilding & Dry Dock Co.....
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Eleven Billion Dollars

The country has announced a building and construction program that calls for the expenditure of an enormous amount of money. *Get your share.*

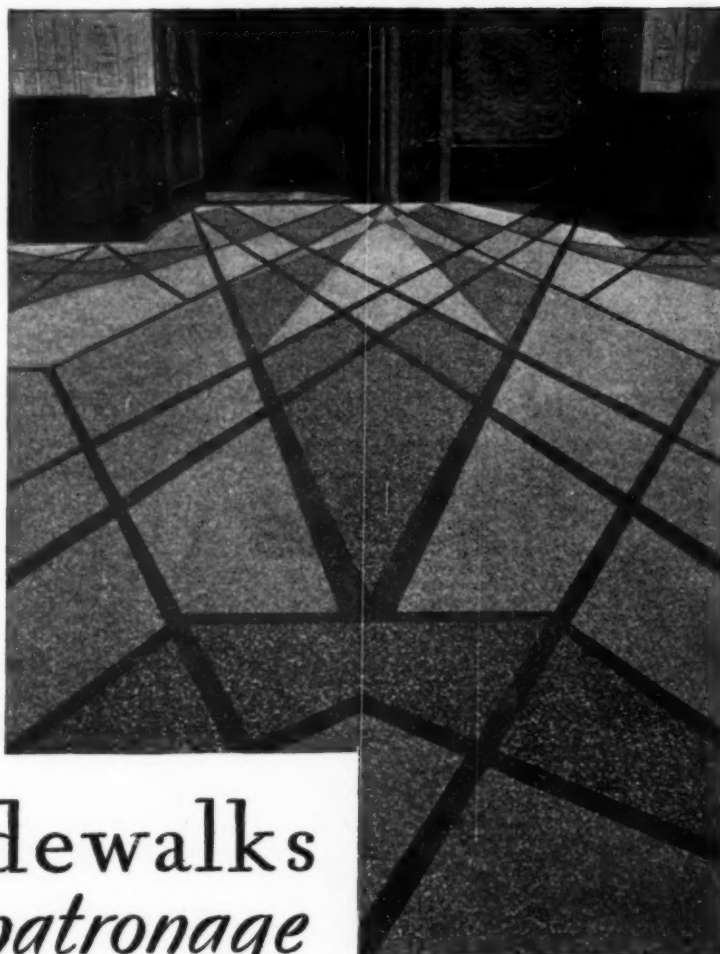
The program is getting under way and will continue to gain momentum from month to month. It is advisable to follow closely the reports in the Daily Construction Bulletin on all industrial, engineering and construction enterprises that are developing in the sixteen Southern States from Maryland to Texas.

DAILY CONSTRUCTION BULLETIN

Published every business day—300 issues a year
Subscription price, \$40.00 a year

Published by MANUFACTURERS RECORD, Baltimore, Md.

*Portland cement concrete sidewalks
surrounding the Wilshire Profes-
sional Building, Los Angeles.
Arthur E. Harvey, Los Angeles,
Architect.*



Sidewalks *which invite patronage*

Sidewalks are playing a new role. They are helping business set the stage for sales, by providing an attractive approach to the shops they border. The patterns illustrated on this page were carried out in terrazzo, one of the specially finished forms of portland cement concrete. The result is really an extension of the lobby floors to the pedestrian area outside — an invitation to enter the building and its shops.

Each day concrete assumes new importance in the realm of business. Its fire-safety affords protection alike to lives and property. It contributes a substantial and enduring beauty to the architecture of smart shop and towering department store. It helps create favorable comment. In building and surroundings, concrete sets a magnificent stage for sales!



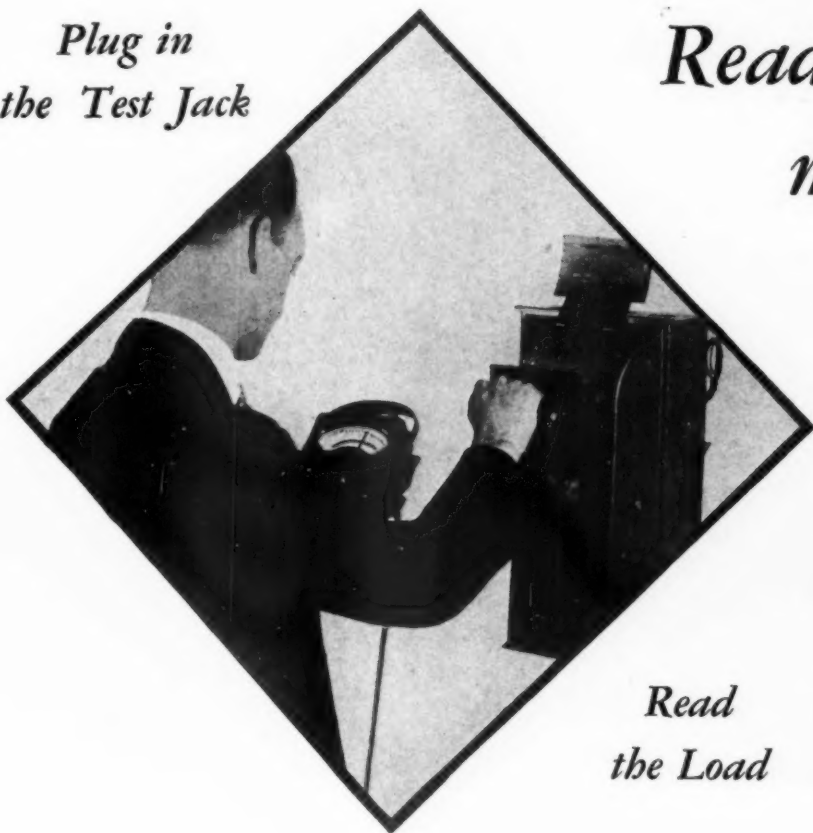
Sidewalk patterns—new and different—may be produced at somewhat less expense than the fine terrazzo here pictured, by mixing suitable mineral colors in the concrete.

PORTLAND CEMENT Association
Concrete for Permanence and Firesafety

33 WEST GRAND AVENUE
CHICAGO

This NEW LINESTARTER

*Plug in
the Test Jack*



*Reads your
motor load*

Features of the new Westinghouse Class 11-200 HD Combination Linestarter for squirrel cage induction motors.

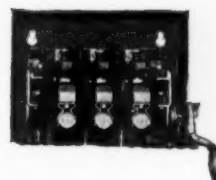
*Read
the Load*

DO you know whether the motors in your plant are overloaded—underloaded—or operating with maximum efficiency and productiveness? If overloaded, they are headed toward a breakdown. If underloaded, there is loss of efficiency—an economic waste in either instance.

The new Westinghouse Class 11-200 HD combination Linestarter and disconnecting switch provides the means for quickly determining the load on motors. This is accomplished with perfect safety and without interfering with production.

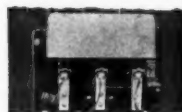
This combination Linestarter has three additional advantages:

Simplified Installation—Only one unit to be installed instead of two. Saves space, wire, conduit and labor.



*Fusible Disconnecting
Switch*

The quick-break disconnecting switch and test jack contacts have high rupturing capacity under heavy overloads. Note compact provision for fuses.



High Capacity Contactor

The sturdy magnetic contactor has rolling contacts. The "De-ion" arc quencher effectively ruptures the motor current without flash or sparks.



Accurate Motor Protection

The combination hand and automatic reset overload relay provides accurate overload and phase-failure protection. The bi-metallic thermal elements are straight pieces and therefore the calibration is unvarying.

Safety—The cabinet door cannot be opened unless the disconnecting switch is opened.

More Continual Production—Automatic reset of the overload relay permits production to continue more promptly after a shutdown.

Service, prompt and efficient, by a coast-to-coast chain of well-equipped shops

Westinghouse

T 31274-A



TUNE IN THE WESTINGHOUSE SALUTE OVER THE N. B. C. NATION-WIDE NETWORK EVERY TUESDAY EVENING.



**2 LIMA
"101"s
for the Albbrook
Airport Job
Balboa, C.Z.**

When your job is far from the base of supplies you must have an excavator that is built to give uninterrupted service—breakdowns can't be tolerated.

The LIMA "101" with its over-size construction insures the user of long life and few repairs.

No other excavator of 1 or 1¼ yard capacity has the power, speed and stability of the LIMA "101".

Remember, too, the LIMA "101" is the only shovel in the world full Timken equipped.

The Ohio Power Shovel Co.

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